No. 1266

United States
Circuit Court of Appeals
For the Ninth Circuit

JOSEPH P. HENNESSEY,

Appellant,

vs.

UNITED STATES OF AMERICA,

Appellee.

BRIEF OF APPELLANT

Upon appeal from the District Court of the United States for the District of Montana.

DOEPKER AND HENNESSEY,
Butte, Montana,
Attorneys for Plaintiff - Appellant.

No. 15063

United States
Circuit Court of Appeals
For the Ninth Circuit

JOSEPH P. HENNESSEY,

Appellant,

vs.

UNITED STATES OF AMERICA,

Appellee.

BRIEF OF APPELLANT

Upon appeal from the District Court of the United States for the District of Montana.

DOEPKER AND HENNESSEY,
Butte, Montana,
Attorneys for Plaintiff - Appellant.

SUBJECT MATTER INDEX

SUBJECT MATTER INDEX—Continued

APPENDIX Illustrations of Anatomy
(Following Last Page).

Fig. 577. Showing side view, cross section male abdomen. Illustrating position of veins and arteries.

Fig. 4. Diagrammatic sketch. Showing collateral venous return, when common iliac vein is interrupted.

Fig. 626. Diagrammatic illustration: The venae cavae and azygos veins with their tributaries. Showing venous channels near spinal cord for collateral returns when caval system is interrupted.

INDEX

MEDICAL AND SURGICAL TEXTS

TABLE OF CASES

TABLE OF CASES—Continued

TABLE OF CASES—Continued

CODES

United States

State of Montana
Revised Codes 1947

No. 15063

United States
Circuit Court of Appeals
For the Ninth Circuit

JOSEPH P. HENNESSEY,

Appellant,

vs.

UNITED STATES OF AMERICA,

Appellee.

BRIEF OF APPELLANT

This appeal arises because the appellant verily believes that the judgment in his favor was entirely inadequate because the evidence in the case clearly shows that he sustained a disability, because of the negligence of an employee and servant of the defendant, while the servant was acting in the scope and course of his employment by defendant, which directly and proximately resulted in injury to appellant which has permanently crippled him but which the District Court failed to find was established by the evidence in the case.

Therefore, the court limited the recovery of damages to a part only of the disabilty and personal injury.

The jurisdiction of the District Court was established because the case arose under the provisions of the Federal Tort Claims Act, Title 28, Section 1346 (b) U.S.C.A.

Section 1402 (b) U. S. C. A.; Section 2674 U. S. C. A. The Legislative Re-organization Act of 1946, Title IV, Part 3, Section 410 (a) second session of the 79th Congress of the United States of America.

The matter in controversy, exclusive of interest and costs exceed the sum of Three Thousand Dollars.

The Complaint appears R. 3 to 6; the Answer of the defendant appears R. 6 to 8; the Court's Findings of Fact and Conclusions of Law R. 8 to 15; the Court's Judgment appears R. 24.

This is a final judgment of the District Court.

The jurisdiction of this Court arises from the Notice of Appeal filed January 25th, 1956.

This appeal is allowed under the provisions of Section 225 of Title 28 U. S. C. A., being Judicial Code Section 128, as amended; Section 1291 Title 28 U. S. C. A.

STATEMENT OF THE CASE

The appellant, Joseph P. Hennessey, a resident of Billings, Montana, on June 2nd, 1949, prepared to make a flight from the airport of Western Air Lines at Phillips Field, near Pocatello, Idaho; he was making use of a lavatory in the men's toilet at the airport, when one, Fay R. Livingston, an employee of the United States Weather Bureau, then engaged in making weather observations in an upstairs room above and adjacent to the said men's toilet, stepped into the attic of the airport in the darkness to ascertain if he had left workmen in the darkness of the attic. He had pulled out an extension cord out of its socket as he came down the steps of the Weather Bureau's theodolite room after making a weather observation for

the defendant. He negligently failed to connect up the extension cord before stepping into a place he knew nothing about, without sufficient light; failed to look where he was going and, knowing the building he was in was unfinished, stepped between the joists on some plaster board and fell through the ceiling onto the appellant who was washing his hands in a lavatory below.

Mr. Livingston was a man five feet four inches in height and weighed between one hundred fifteen and one hundred thirty pounds.

He fell a distance of ten feet nine inches from his center of gravity above the ceiling of the wash room in a free vertical fall, striking the appellant squarely on his right shoulder and upper back, slid to the left side of his back, and then Livingston fell off the appellant approximately four feet to the concrete floor of the men's toilet sustaining nothing but a slightly bruised knee. In other words, the force of the fall was absorbed by appellant's body.

An uninterrupted fall to the concrete floor (the ceiling being twelve feet above the concrete floor) according to mathematical calculation would result in a striking force of 1840 foot pounds.

Appellant, then being a man six feet one inch in height, weighing 170 pounds, wih his feet firmly on the floor, slightly bent forward, mathematically, absorbed with his body a force of 1288 foot pounds, when Livingston fell upon him.

The effect of this episode was such that, at the moment, the appellant did not appreciate fully what had happened to him; he was not crushed to the floor but was shaken and noticed a catch in his right shoulder.

However, later developments disclosed that the muscles, tissues and tendons of his shoulder and neck were hurt, producing a supra-clavicular neuritis of the right shoulder which persisted and persists; he sustained an injury to his back which apparently cleared up.

Then followed a development about which the appellant urges that it was proved that a vascular catastrophe resulted from this accident which is and was of extremely serious consequence to him. We will show that a thrombosis developed in the deep blood vessels and grew until it became so great that it suddenly blocked the blood vessels of his right and left leg as it dislodged and went down into the smaller blood vessels approximately six months later.

This development, however, the District Court found was not proven to be the proximate result of the fall of Livingston upon appellant and thereby because of the said failure of proof appellant was denied relief in the District Court for the damages which resulted, although damages for the other injuries were awarded to appellant.

Contending that this finding of the Court was clearly erroneous, under the evidence, appellant appeals to this Court for relief.

This question of the inadequacy of the damages allowed is the only matter involved in this appeal.

THE CERTIFIED EXHIBITS

We will make brief explanations of the certified original exhibits so that the Court will have a composite picture of the case:

Exhibit 1.

Consists of the original St. Vincent's Hospital record from Billings, Montana, where appellant was hospitalized from November 29th, 1949, to December 4th, 1949, because of hoarseness of thirty hours duration, swollen throat, and chest pains. This hospitalization took place five weeks before the catastrophe struck which has crippled appellant for life. A most significant portion of this record, made at a time prior to the catastrophe, *which directly connects the fall of Livingston upon appellant with his terribly crippled conditions* appears in this record:

"HE ALSO COMPLAINED OF PAIN IN HIS UPPER ABDOMEN OF SEVERAL MONTHS DURATION, WHICH WAS WORSE ON INSPIRATION AND ON BENDING FORWARD. THIS HAD BECOME MARKEDLY AGGRAVATED THE LAST FEW WEEKS BEFORE ADMISSION.

Exhibit 2.

Consists of the original Deaconess Hospital Record from Billings, Montana, where appellant was hospitalized again on January 3rd, 1950 for a recurrence of the hoarseness, swollen throat and chest pains. An upper respiratory infection which had not cleared diagnosed as a border line pneumonia. After three days he was scheduled to leave the hospital. On the morning of January 7th appellant arose to leave hospital, arrangements were made for his discharge that morning. Suddenly left leg went numb; then both legs were numb and appellant keeled over; excruciating pain, then unconsciousness; great pain

in lower back near third lumbar vertebra; whitish cyanosis of both feet an area of right foot became discolored; a vasospastic phenomenon; the right foot cleared except for small space; in midafternoon a recurrence. This was diagnosed as a saddle embolis or condition, a clot in the aorta, temporarily lodged were the aorta splits to go down either leg; evidently the largest part of clot slipped off and went down to behind left knee. Then followed leg spasms in the left leg of 5 to 10 minutes duration causing the right leg to extend involuntary; the left leg did not move. Under sedation most of the time; treatment with dicumarol, heparin-blood anti-coagulents; heavy sedation to attempt to break up spasms in the blood vessels—morphine, papaverine; injection of novacaine alongside the spinal column, gangrene—death of tissue enmasse; destruction of muscle; destruction of tissue; destruction of nerve tissue. The foregoing is a summary of the contents of Deaconess Hospital Chart Exhibit Number 2, to March 12th, 1950.

Exhibits 5 and 6.

Original St. James Hospital Records, Butte, Montana, 1934, and Selective Service Records. Principally relating to a history of pneumonia and a development of nephritis where appellant was hospitalized for several months as a youth of seventeen years resulting in a carry-over into the Selective Service Records of appellant where he was rejected for service in the armed forces because of the history of nephritis. (N.B. We comment here that all physicians testifying in this case excluded nephritis or this history as a possible cause of the vascular catastrophe.)

Exhibits 4, 13, 14, 16, 17, 20, 21, and 22.

Constitute selected pictures and sketches of the airport buildings at Phillips Field and the Weather Bureau Quarters showing the scene of the accident where Livingston fell through the ceiling above the men's toilet upon appellant.

Exhibit 7.

A bodyscope illustration of the position of the vena cava and aorta used to illustrate testimony.

Exhibits 10 and 23.

Statements of Soltero Clinic and Deaconess Hospital showing portion of expenses incurred, by appellant.

QUESTIONS INVOLVED

1. Whether or not the District Court erred in making its Finding of Fact Number XII when it failed to go further and find that as a direct and proximate result of the negligence of Fay R. Livingston mentioned in its Finding of Fact Number XI appellant sustained the personal injuries described and set out in its Finding of Fact Number XIV. (R. 12 to 14.)

This question is raised because an examination of all of the medical testimony will show, with respect to the said vascular catastrophe, that no witness except appellant's Dr. Horst had any explanation of the cause thereof or where it originated.

2. Whether or not the District Court erred in its Finding of Fact Number XV to the effect that the Court "Is unable to find that the blood clot, referred to in its Finding of Fact XIV and the resulting damage therefrom, was

caused by an injury sustained when Fay R. Livingston fell upon him at the airport in Pocatello, Idaho, as found above." (R. 14.)

This question is raised because an examination of the medical testimony will show, with respect to the said vascular catastrophe, that all medical witnesses agree that the crippled condition of the appellant was the result of the blood supply to his legs being shut off by an embolus that blocked the circulation; that all known sources of the emboli, except traumatic, were eliminated because of absence of disease and the presence of healthy lungs, healthy heart, healthy blood vessels, absence of infection sufficient to produce an embolus. Further, appellant's witness, Dr. Horst, a physician of many years experience and one who had made an exhaustive study of the problem and a careful personal examination of appellant, testified to a completely logical and reasonable explanation connecting the fall of Livingston upon appellant as the proximate, efficient and producing cause of the traumatic damage to the blood vessels which resulted in the propagation of the thrombus and dislodgment of the emboli which resulted in this damage to appellant.

3. Whether or not the District Court erred in failing to conclude in its "Conclusions of Law" that, as a direct and proximate result of Fay Livingston's negligent and careless acts and omissions, as a servant of the United States, acting within the course and scope of his employment, the appellant, Joseph P. Hennessey, is entitled to additional special damages and damages for injuries set forth in Court's Finding of Fact XIV. (R. 15.)

4. Whether or not the District Court erred in refusing

to grant appellant's Motion for Amendment of Findings, in accordance with his motion for a New Trial or Amendment of Findings. These questions are raised for the reasons heretofore explained with respect to the vascular catastrophe and the entire record showing by a preponderance of the evidence that the proximate cause of this crippled condition and disability of appellant was the fall of Livingston upon him as found in Court's Finding of Fact number IX. (R. 11.)

5. Whether or not the District Court erred by making its order on the Motion for a New Trial or Amendment of Findings in denying Appellant's Motion.

This question is raised as the legal relief appellant was entitled to for the reasons heretofore given from the facts and evidence was denied him by the District Court in its refusal to amend the findings.

6. Whether or not the District Court erred in directing and entering an inadequate amount of damages considering the evidence in the case.

This question is raised upon the evidence directed to the proximate cause of the great vascular catastrophe suffered by appellant which injuries and resulting damage were eliminated from consideration by the District Court upon an alleged failure of proof.

SPECIFICATIONS OF ERROR

The following specifications of error are all presented to this Court for review upon the record of the evidence in this case concerning the proximate cause of the great vascular catastrophe suffered by appellant, without repeating after each assignment of error.

Three witnesses, all duly licensed physicians and surgeons, testified concerning this phenomenon, one was the attending physician whose chief concern was the application of all remedies known to medical science, as far as he knew, to combat, relieve and attempt to cure the sudden devastating onslaught upon the nerves, tissues and tendons of the appellant, rather than to make an exhaustive study of the reasons for the condition; another who was called by the defendant, a young man of seven years experience, who was unable to say what caused the catastrophe, but who directed his testimony against portions of the findings made by the physician and surgeon of many years experience, who, appellant contends, gave a clearly explained and reasonable account of the entire matter, after a searching, considered study of the life history of appellant, with a careful personal examination of him and fortified by the original hospital records of appellant's history and attention to the testimony of the four physicians and surgeons who testified in the case.

This latter the District Court refused to agree with and completely disagreeing with the reasonable, credible evidence of Dr. Horst, found against the appellant on this part of the case.

We shall further allude to the specifications of error in our argument but here advise the Court that they are all based on the foregoing explanation of appellant's contentions.

I.

The District Court erred in its finding number XII, when it failed to find further, in addition to the finding it made that as a direct result of the negligence of Fay

R. Livingston, mentioned in Finding of Fact XI, the plaintiff sustained the personal injuries set out in its Finding of Fact number XIV.

Finding of Fact No. XII is as follows:

> "That as the direct result of the negligence of Fay R. Livingston mentioned in Finding of Fact XI herein, the plaintiff Joseph P. Hennessey, sustained the following personal injuries:
>
> The muscles, tissues and tendons of his shoulder and neck were hurt, producing a supra-clavicular neuritis of the right shoulder, and plaintiff continues to suffer some slight discomfiture from such condition and will in the future suffer such discomfiture. He sustained an injury to his back. The back injury cleared up. By reason of his injury plaintiff was required to incur the following expenses: Soltero Medical and Surgical Group, Billings, Montana, $12.00 for treatment of shoulder." (R. 13 to 14.)

Appellant says the Court erred in not finding further that:

> "; as the direct result of the negligence of Fay R. Livingston, mentioned in Finding of Fact XI the plaintiff sustained the following personal injuries:
>
> 'That on or about January 7, 1950, the plaintiff suffered a blood clot or embolus in his aorta which temporarily lodged where the aorta splits to go down either leg; that thereafter the blood clot or embolus became dislodged from where it had stopped at the junction of the aorta and slipped down in the artery of the plaintiff's left leg; that as a result of said blood clot or embolus the blood supply to plaintiff's legs was cut off, plaintiff suffered excruciating pain in the region of the lower back and legs, and plaintiff has suffered considerable, total and permanent damage to his left leg.

District Court's Finding of Fact Number XIV (R. 14.)

II.

The District Court erred in its Finding of Fact Number XV that:

> "That as a result of all the evidence in the case and particularly medical testimony, the Court is unable to find that the blood clot, referred to in Finding of Fact XIV, and the resulting damage therefrom, was caused by any injury he sustained when Fay R. Livingston fell upon him at the airport in Pocatello, Idaho, as found above."

FINDING OF FACT NUMBER XV. (R. 14.)

> N. B. Finding of Fact Number XIV mentioned in the finding above appears directly preceding Specification of Error II and is not repeated here as it would be unnecessary repetition.

III.

The District Court erred in failing to conclude in its "Conclusions of Law" that as a direct and proximate result of Fay Livingston's negligent and careless acts and omissions as a servant of the United States, acting within the course and scope of his employment, the plaintiff Joseph P. Hennessey is entitled to additional special damages and damages for the injuries set forth in Court's Finding of Fact XIV.

Unimpeached credible evidence presented by appellant's witness Dr. Horst demonstrates, beyond doubt, that the severe vascular catastrophe was the direct and proximate result of this fall of Livingston upon appellant. (R. 193, 242, 248, 284, 306, 316, 334 et seq.)

IV.

The District Court erred in refusing to grant Appellant's motion for amendment of findings in accordance with his motion for a New Trial or Amendment of Findings. (R. 16 and 17.)

Plaintiff's and appellant's Motion for New Trial and Amendment of Findings is as follows:

This Motion is set out in the Record, P. 16. The Court's Order appears (R. 17 - 23.)

To present the matter here in concise form we quote the following from the Motion:

> "In the alternative plaintiff moves the Court to amend its Findings of Fact and Conclusions of Law as follows:
>
> 'To substitute Court's Finding of Fact Number XIV (above) by finding in place thereof in accordance with paragraph one, three, four, five, six and seven (unnumbered) of Plaintiff's proposed Findings of Fact and Conclusions of Law contained on pages 6, 7 and 8 thereof from plaintiff's proposed finding 13.' (R. 16.)
>
> 'To substitute plaintiff's proposed Finding of Fact (R. 16) Number 15 instead of Court's Finding of Fact Number XV. (R. 17.)
>
> To amend Court's Conclusions of Law in accordance with the Findings of Fact as thus amended'."

WE NOW QUOTE IN FULL THE SUBSTANCE OF PARAGRAPHS ONE, THREE, FOUR, FIVE, SIX AND SEVEN (unnumbered) OF PLAINTIFF'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW CONTAINED ON PAGES 6, 7, and 8 THEREOF, FROM PLAINTIFF'S PROPOSED FINDING 13:

PLAINTIFF'S PROPOSED FINDING XIII.

1. "That as the direct result of the negligence of Fay R. Livingston mentioned in Finding of Fact Twelve herein, the plaintiff Joseph P. Hennessey, sustained the following personal injuries:

3. He sustained an injury to the deep blood vessels in the abdomen which caused a painful reaction in the right upper quadrant of his abdomen which continued from June 2nd, 1949, through January 7th, 1950, and on January 7th, 1950, plaintiff developed numbness of both feet and up both legs to his knees and he suffered severe pain around the third lumbar vertebra; the pain was excruciating and a partial whitish cyanosis of both feet developed with coldness and bilateral absent lower leg reflexes, severe tenderness about plaintiff's third lumbar spinous process. His right foot became normal in one and one-half hours leaving some residual pain in the right heel. A thrombus had formed in the deep blood vessels of the plaintiff's abdomen and a saddle embolus went down into the legs; an area of gangrene developed in plaintiff's left leg which gradually diminished. Plaintiff had a gradual improvement with the areas of gangrene but the clot having diminished the supply of blood caused a destruction of the muscle and nerve tissue of plaintiff's left leg and permanently damaged his leg, ankle and foot which produced a permanent drop foot in plaintiff's left leg. Plaintiff suffered constant excruciating pain, spasms in the blood vessels and tremendous destruction of tissue in his left leg,

ankle and foot which caused the plaintiff to suffer extreme physical and mental pain and anguish for several months subsequent to January 7th, 1950. Thereafter plaintif made slight partial recovery of the damage to his legs, but continued to suffer extreme pain and anguish, with loss of sleep and inability to walk without support of crutches and up to the time of the trial in January 1953 the plantiff was unable to walk without extreme pain, and with reasonable certainty his condition is permanent and no further recovery can be anticipated. All of plaintiff's injuries were directly caused by the fall of Fay R. Livingston upon him on June 2nd, 1949.

4. That on June 2nd, 1949, the plaintiff had a life expectancy of 33.42 years; that on January 15th, 1953, he had a life expectancy of 31.07 years.

5. That by reason of his injuries plaintiff was required ot incur the following expenses: Deaconess Hospital, Billings, Montana, $995.50; from January 7th to March 12th, 1950, inclusive; Soltero Medical & Surgical Group, Billings, Montana, $12.00 for treatment of shoulder and the further sum of $236.50 from January 7th to May 10th, 1950; $136.00 for Physiotherapy treatments; $240.00 convalescence quarters from March 12th to May 11th, 1950; that with reasonable certainty the plaintiff will be required to expend the sum of $1880.00 for future hospital and medical treatment, reasonably necessary to treat his injuries sustained June 2nd, 1949.

6. That on June 2nd, 1949, plaintiff had an established business as an attorney at law in Billings, Montana, from which he could reasonably anticipate net earnings of at least $5000.00 per year. During the year 1950 plaintiff lost 80% of his earnings in the amount of $4000.00; in the year 1951 plaintiff lost $3000.00 of his earnings and the further sum of $1500.00 in the year 1952. All of the foregoing loss of earnings were directly due to his injuries sustained on June 2nd 1949.

7. That with reasonable certainty, as the direct result of his injuries sustained on June 2nd, 1949, plaintiff's earning ability has been depreciated and with reasonable certainty will be depreciated in the future. Therefore, he will lose in the future at least $1000.00 per year during his life expectancy. The present worth of his sum being $16,000.00."

The granting of the portion of the Motion to Amend Findings will have the following effect:

Court's Finding of Fact XV (R. 14.) See Page 13 above.

Plaintiff's proposed finding of fact 15 is as follows:

"15. That by reason of the negligent acts and omissions of defendant's servant and employee, Fay R. Livingston, the plaintiff Joseph P. Hennessey, has sustained damage because of his other physical injuries, past and future pain and suffering and loss of ability to follow important duties of his profession, in the reasonable sum of $18,000.00."

V.

The District Court erred in making its order on the Motion for New Trial or Amendment of Findings in denying Plaintiff's Motion. (R. 17 to 23.)

The Motion and Order are set out in the appendix to this brief on account of the length thereof. The Motion appears also in R. 16 to 17.

VI.

The District Court erred in directing and entering judgment for an inadequate amount of damages considering the evidence in the case. (R. 15.)

This question arises because of the Conclusions of Law which, in effect, deny relief to appellant for the major part of his injuries.

The Conclusions of Law follow:

(omitting the conclusion as to jurisdiction.)

"II.

That as a direct and proximate result of the said negligent and careless acts and omissions of the servant of the defendant, the United States of America, namely, Fay R. Livingston, acting within the course and scope of his employment, the plaintiff, Joseph P. Hennessey, was injured as aforesaid and is entitled to judgment against the defendant, the United States of America, as follows:

(A) Special damages: Doctor, $12.00.

(B) Damage because of injury to plaintiff's shoulder, neck and back, $2,500.00.

III.

Let judgment be entered in favor of the plaintiff, Joseph P. Hennessey, and against the defendant, the United States of America, for the sum of Two Thousand Five Hundred Twelve and no/100ths Dollars ($2,512.00,) (R. 15.)"

We contend that these Conclusions of Law are clearly erroneous under the evidence in this case and deny to appellent that which he is justly entitled to in the nature of recovery for his injuries.

ARGUMENT

There is no controversy between Appellant and Apelleee on the District Court's Findings of Fact, except on the decision as to the cause of the severe vascular catastrophe admittedly suffered by appellant, with the resulting damages sustained by him.

The testimony of appellant, Joseph P. Hennessey, the deposition of the Weather Bureau employee, Fay R. Livingston, who fell through the ceiling of the men's lavatory upon appellant, the testimony of H. Edgar Strahl, the special agent for the Federal Bureau of Investigation, (who identified many of the original exhibits certified to this Court) are all in the record to aid the Court in its review of this case on the point of disagreement between Appellant and Appellee.

The testimony of witness Harry C. Wheeler is in the record with the introduction of the statement of expenses Deaconess Hospital—Original Exhibit 23.

Dr. Harry R. Soltero testifies concerning the neck and shoulder injuries sustained by appellant. (R. 95 to 107.) He did not go into the matter of the vascular damage.

The physicians and surgeons who testified on the subject of the controversy between appellant and appellee in this case were:

Dr. C. H. Horst,

Dr. Robert Scott Stokoe,

Dr. Louis Clayton Allard.

Observing the original exhibit Number 7, the Court will note the position of the two large blood vessels, one the vena cava, the other the aorta running down below the

diaphragm in the human body. They are immediately in front of the spinal column, the vena cava being the nearer of the two; they both bifurcate forming an inverted Y, branching into arteries and veins leading to the legs. This Court knows, in common with the members of the human race, that the aorta is the much more elastic and tougher than is the vena cava; that the blood courses rapidly downward in the aorta and moves much slower and upward in the vena cava in the process of circulation through the body.

What effect did the fall of Livingston on the appellant have on the columns of blood in these two vessels?

Quoting from an article in The New England Journal of Medicine alluded to in the Court's opinion and in the testimony of Dr. Horst (R. 318) we find the following:

> "Mengert and Murphy have recorded intra-abdominal pressures as high as 200 mm. of mercury when patients strain voluntarily. These high intra-abdominal pressures, which accompany fixation of the diaphragm and contraction of the abdominal musculature, as in straining, lifting and jumping, must be directly reflected by sharp venous pressure elevations in the vena cava, iliac veins and then the femoropopliteal veins, in accordance with Pascal's law, which states that pressure applied to an enclosed fluid is tranmitted equally in all directions and acts with equal force on equal surfaces. * * * The venous wall * * * must vary markedly from place to place in firmness of its muscular and fascial support. Any local weak point, such as a foramen ovale, would permit a bursting force to be applied to the vein wall * * *."
>
> (Copy of The Journal has been certified to this Court.)

This Court certainly can and will reasonably compare the force of a voluntary straining with the tremendous force of a 120 to 130 pound man falling upon appellant for a distance ten feet nine inches from his center of gravity downward, with the unexpecting appellant bent forward in a manner which would tend to compress both aorta and vena cava among the tissues against the backbone. Beyond doubt this force, transmitted through the blood vessels downward, would strike against the cramped walls or one or other or both of these blood vessels, with reasonable probability damaging them.

Here, let us inform the Court, that one of the unfortunate circumstances which developed with the medical witnesses in this case was a disagreement which blood vessel, aorta or vena cava subsequently disclosed the thrombosis, the resulting embolus and the consequent damage to appellant.

IT ABUNDANTLY APPEARS FROM THE TESTIMONY, HOWEVER, THAT THE END RESULT, AS FAR AS THE CRIPPLING OF APPELLANT IS CONCERNED, WOULD BE THE SAME.

It most certainly is true that if the circulation of blood is stopped in the legs the damage will be the same whether it is stopped in the veins or in the arteries. Tissue will die in either case. Yet, off on this tangent, controversies developed in the case which left the appellant discomfited and denied relief.

Therefore, we respectfully request this Court to keep this truth in mind as review of this evidence is made to

determine that, which we contend, demonstrates that the learned jurist, who tried the case, made a decision which was clearly erroneous under the evidence.

For the reason that all of our Specifications of Error which have been specified above arise out of this question we will attempt to aid the Court with our reasoning in the premises and present the specifications together.

Summarizing now the evidence which is important to the decision in this case and which is the evidence of the physicians and surgeons who testified on the matter of the vascular catastrophe suffered by appellant we will start with the physician who was attending him when the casualty struck, Dr. Robert Scott Stokoe and present the:

SUMMARY OF EVIDENCE

Dr. Robert Scott Stokoe, an admittedly qualified physician and surgeon practicing in Billings, Montana, had as his patient appellant, Joseph P. Hennessey, and after examination of him late in November, 1949, admitted him to St. Vincent's Hospital, on November 29th, 1949.

He entered the hospital with the complaint of hoarseness of thirty hours duration.

A very important circumstance in this case was in addition to a complaint of chest pains, *he also complained of pain in his upper abdomen of several months duration, which was worse on inspiration and on bending forward. This had become markedly aggravated the last few weeks before admission.* (R. 132.) See also exhibit 1, St. Vincent's Hospital chart under record of complaints.

Appellant was hospitalized because of a diagnosis of acute Laryngitis. He made a complete physical examination of appellant. A previous nephritis was entered in the history. His examination disclosed a tender liver area which could be felt. Laboratory test was made, including a very sensitive liver test, which disclosed that appellant's liver was all right and within normal limits.

His urine was normal with the exception of a trace of albumen and acetone. His red blood count was mildly above normal. On account of chest pains and bronchitis, X-rays of his lungs were taken which revealed some increased markings which the radiologist felt was compatible with sinusitis or a post nasal drip. These were not taken with any serious note. He was discharged from the hospital December 4th, 1949. (R. 133.)

No disease nor trauma was found connected with his heart; nothing serious concerning his lungs; he was not suffering with nephritis.

Dr. Stokoe had the appellant as his patient again on January 3rd, 1950, when he admitted him to the Deaconess Hospital, Billings, Montana. On this occasion the doctor believed he had a borderline case of Bronchopneumonia but X-rays taken at the time revealed a normal adult chest; normal lungs, heart and the chest wall; he had a swollen throat and a slightly elevated blood pressure; there was no heart murmur; no lung abscess and his progress was satisfactory to the 6th of January, 1950. They planned to discharge him the next day and discontinued all medication except cough syrup. (R. 138 to 140.)

On the morning of January 7th, 1950, appellant collapsed with severe pain in his lower extremities. He had

awakened with numbness of both feet which progressed up both legs to his knees and he developed a severe pain around the third lumbar veterbrae.

The pain was excruciating and the doctor observed a partial Whitish cyanosis of both feet with coldness and bilateral absent lower leg reflexes, severe tenderness about his third lumbar spinous process. He responded well to morphine with atropine.

Emergency X-rays were taken of his back with a mistaken diagnosis of two old fractured transverse processes on the left which later proved not to have been injured.

There was an area on his right foot which within one and one-half hours became normal but which left some residual pain in his right heel.

His reflexes then began returning in his left foot but the discoloration persisted.

The excruciating pain markedly elevated the blood pressure but his heart was negative. Dr. Stokoe believed it to be a vasospastic phenomenon and he was treated symptomatically for a few hours.

He remained in bed and improved to about 3:30 in the afternoon when he had an acute recurrence of pain behind his left knee extending on down to his great toe. (R. 142-143.)

He had a marked vessel spasm which was because of a saddle embolus or condition, a clot, in the aorta where it splits to go down either leg; evidently the larger portion slipped off and went down behind his left knee.

There was obviously no blood coming into the legs or, if any, a very minimal amount. Witness did not think at first it was a clot in the aorta but subsequently decided

it had to be a saddle embolus at the bifurcation which had slipped off and had gone down into the leg further.

In judging the exact condition, the whiteness and coldness of the leg, the pain in the back would go along with a saddle embolus, the pain in the area of the third lumbar vetrebrae or lower back, indicated the same but there was nothing palpable, feelable evidence of the exact location of this embolus at this time. (R. 144-145.)

On the 7th, 8th or 9th of January, 1950, in the midst of medical struggle against the effects of the vascular catastrophe that had struck, Dr. Stokoe could not find anything direct or palpable which was evidence as to exactly which blood vessel the embolus was in. (R. 145.) His deductions were from the symptoms; an embolus in an artery in the space behind the knee is in very deep and it is extremely difficult to feel that artery on some people, even when everything is normal. You just barely can get a pulsation behind the knee. (R. 145.) Dr. Stokoe started immediately to treat the condition, injecting the sympathetic nerves to the left side of the spine; giving appellant anticoagulants to prevent further blood clot formation and to help dissolve the clot; gave heavy sedation to attempt to break the spasms in the blood vessels he used heparin and dicumarol to stop further clotting; papaverine and morphine and a barbiturate and did everything in his knowledge from medical science to contest the condition.

Nevertheless, because of the lack of blood supply to the leg there was destruction of tissue, destruction of muscle, destruction of nerve tissue leaving permanent residuals in his leg, ankle and foot including a drop foot. (R. 149.)

The last dose of antico-agulant was given February 4th, 1950.

Subsequently, before he left the hospital an X ray examination was made for determining whether there was any pathology in the heart, the aorta and lungs also diaphram and X rays of the legs.

The X rays of the heart, lungs, and diaphram were all negative. There was no evidence of disease which would be responsible for the embolus. (R. 151-152.)

Dr. Stokoe then related the known sources of blood clots from medical science.

They must arise within the vascular tree. Small clots can get thru the heart between the right and left side in extremely rare cases where there is a defect or opening in the heart which is congenital called a foramen ovale where the clot gets through from one auricle to the other shunting the lungs. There was no such condition in the appellant's heart.

Another source of embolus would be the blood vessels of the lungs themselves, that is, the pulmonary veins or contributor to the pulmonary veins.

The next cource of embolus would be from the valves of the heart that is the left side of the heart or from the wall of the heart muscle.

The next source of embolus would be the wall of the aorta.

The embolus must arise from within the lining of the blood vessel.

As to the walls of the blood vessel it can arise from infection in the wall of the blood vessel or from something eroding through into the inside of the blood vessel, an infection and it can arise from injury to the lining of the blood vessel.

Dr. Stokoe rules out infection.

He ruled out any conditions in the heart. There was no heart disease.

There was no condition in the lung area which would cause an embolus.

Doctors name a blood clot that adheres to the wall of a blood vessel a thrombus.

Where a thrombus was attached to the wall of a blood vessel while a patient was resting in bed, it can either stay there as it was before, or under circumstances of bed rest with changes in the blood vessel accompaning bed rest, and the changes in pressures, the thrombus could break off and go on down the vessel as an embolism.

A thrombus due to one cause might form at a different rate of speed than a thrombus due to another because it depends upon how much injury there is to the blood vessel, or the wall, by the infection or injury. It depends upon the clotting mechanism of the patient, it depends upon the rate of flow of the blood. There are many factors which affect the speed of forming thrombi and how it acts.

Dr. Stokoe then explains the Bodyscope. Plaintiff's exhibit 7.

Dr. Stokoe then establishes that he found an embolus in the patient, the appellant, on the 7th day of January, 1950. (R. 150 to 162.)

Then Dr. Stokoe was asked what the source of the embolus in his opinion was. His reply is as follows:

> "I can't state where the embolus arose; it is impossible to state where it arose by anything short of an autopsy; I couldn't say where it arose. When we

do eliminate the heart and we do eliminate the lungs, we can simply give an opinion that it may have arisen from the wall of the aorta as the only other remaining source, providing we also rule out a patent foramen ovale, which we previously discussed, through which an embolus could conceivably get from the venous side of the body to the arterial side. It is extremely doubtful, and it is extremely rare that an embolus gets from the venous side to the arterial side through this opening; so if we rule out that as well, we know that it had to come from the arterial side, from the lung, the heart, or the aorta, as the only remaining sources.

To the best of our ability we have ruled out the lung, to the best of our ability we have ruled out the heart. I still cannot say that this came from the aorta. It is reasonable that it may have come from the aorta." (R. 163 and 164.)

An embolus comes from a thrombus, the thrombus being a clot, or later on, the residuals of the clot inside the lumen of the vessel. This thrombus itself, or its end product can break off and form an embolus, or a new thrombus can form over an old thrombus and the new thrombus break off and become an embolus.

Dr. Stokoe says that in the case of the appellant there was a thrombus that changed from a thrombus to an embolus in this case.

Dr. Stokoe agrees that Livingston falling upon the appellant would cause extra pressure to be built up in the aorta momentarily but in final analysis could not say where the embolus arose, agreeing that a tear, either minimal or large could happen in the wall of the aorta. Did it happen he doesn't know. It is possible that it did. (R. 166 to 168.)

Concluding his testimony Dr. Stokoe eliminates in his opinion the history of nephritis or the fact of nephritis as well as other infections in the case of the appellant as the source of the embolus which caused the damage. (R. 180 to 187.)

DR. LOUIS CLAYTON ALLARD

Called by the defendant, resides at Billings, Montana, admittedly qualified as a physcian and sugeon, specializing in orthopedics and had been engaged in the practice of his profession for seven years at the time of the trial.

He had made a study of formation of thrombosis in blood vessels. Made a drawing showing a cross section of a blood vessel with the outer walls, the muscle walls, the lining of the vessel and the lumen or hole in the center.

If you had a small clot or a breaking or tearing of that blood vessel, in all probability a thrombus would develop.

The thrombus develops because of small changes in the wall, any irregularity, the cells, platelets, blood cells, begin to pile up, you might say catch on this roughened surface and continue to catch and pile up on this until the thrombus has gone as far as possible, which is the filling of the blood vessel completely.

Witness, in his experience has never seen a completely filled vena cava, however, as an estimate, depending on the condition that gave rise to the thrombus, he would say that anywhere from several days to ten days time at the most the vessel would be occluded with the blocking off completed. Theoretically the aorta could occlude as well as the vena cava could occlude but witness has never seen either one occlude.

The occlusion of the vena cava at and below the level of the body of the second lumbar vertebra would ultimately produce an occlusion also of the lumba spine veins, which is a portion of the venous drainage of the spinal canal. This back flow would produce increasing pressure on the nerves of the cauda equina (horses tail) which are the nerve trunks that still remain inside of the spinal canal after having left the termination of the spinal cord which usually is at the level of the second lumbar veterbra. Witness then describes how the nerve trunks come out and enervate various portions of the body. A vein or veins being occluded would produce some swelling within the spinal canal and cause increasing pressure on the nerve trunks.

Assuming a partial filling of the lumen of the vena cava, as long as the thrombus was partial it would not have any effect on the lower extremities, however that thrombus would continue to build up until complete occlusion thereby producing a damming back of the drainage of the blood from the veins out of the lower extremities and most certainly cause severe swelling of the lower extremities.

It is difficult to make an accurate statement as to the rate a thrombus will build up. However they do not attach to the wall and build a partial thrombus. "I don't have any accurate figures. However, it would be my estimation again that it would cover a period of two weeks time for a thrombus to develop and occlude the vessel. (R. 385 to 393).

On January 13th 1953, witness examined plaintiff and appellant Joseph P. Hennessey. Made a complete physical

examination. He elicited the history from him and examined his heart, lungs, blood pressure, pulse rate, and examined his lower extremities.

He found the lower extremeties of equal length; an atrophy of the lower calf and foot on the left, with change in the consistency and a brownish discoloration of the left foot.

The neutral or most relaxed position of the foot was at an angle of 145 degrees, which, in our measurements assumes that when the foot is parallel with the foreleg it would be 180 degrees; at a right angle 90 degrees. The left foot could be forced up to or dorsiflexed upward to 135 degrees and plantarian flexed or moved downward to 160 degrees. There was a mild degree of limitation of inversion of the foot—rotating it inward, and moderate limitation of eversion of the foot. The contour of the right leg appeared normal, with full range of motion at the ankle. The arterial pulsations of the ankle and foot regions, both sides, were markedly diminished to palpation. Tests of his sensation by means of knife point revealed marked increased sensitivity of the entire left foot below the ankle, most marked on the sole of the foot. Also increased sensation of the toes of the right foot.

Dr. Allard reviewed the Deaconess Hospital record and took a history from appellant and it was his impression that Mr. Hennessey suffered an occlusion—first of all suffered a saddle embolus at the bifurcation of the aorta and that on the same day it slipped off the saddle and lodged in the arteries of the left lower extremity producing an occlusion of the arterial supply there.

As to the source of the embolus in this particular case there is nothing specific to indicate any definite site of origin and nothing to give us a clue or guide as to this area.

A thrombus that developed 20 years previously or five years old or six months old would have organized or would have changed to scar tissue and by that time would be an integral part of the blood vessel, rather than an inert clot.

Heparin and dicumarol are anti-coagulants; they lower the prothrombin time, or in other words, they lower the clotting ability of the blood in order to prevent propagation of the thrombus and that is its effect, the prevention of further coagulation. They do not dissolve the embolus or scar tissue that has fallen off.

If you had an occlusion of the vena cava an auxilliary circulation or colateral circulation would principably be through the superficial walls of the abdomen and are easily recognized. He did not find any condition of that kind in appellant.

Doctor Allard checked the shoulder and back and relates his findings. (These are not in issue and we pass them).

He repeats that he does not know nor could he tell from the history or records of the Deaconess Hospital where the source of the saddle embolus was.

He does not believe that a severe blow on the shoulder where the blood was compressed down and distend the aorta could start a thrombus there. An injury to the inner lining of the aorta would cause a thrombus to form. (R. 393 to 405.)

He never observed a case where there was a thrombus in the aorta itself.

The evidence of a thrombus, grown to occlusion, because of the shutting off of the blood supply, the collateral supply will not develop as rapidly there would be excruciating pain; there would be, first of all a conspicuous pallor, a very white, dead appearance of the skin, a whitish and ultimately the sloughly bluish discoloration which precedes gangrene, and ultimately gangrene, assuming that a patient survived long enough to develop gangrene and I don't believe that a patient would live long enough to develop gangrene if the aorta were occluded.

He then responds to question from the Court, excluding the known sources of an embolus on the arterial side, the heart, the pulmonary vein the paradoxical patent foramen ovale.

He has no idea from the study of the case and the records which he reviewed where the embolus came from.

He would not say that it was impossible to have a blow struck in the shoulder and force the blood down to rupture the inner lining of the blood vessel but he would say it was highly unlikely.

But it could happen.

There was an embolus but he cannot say where the source was. (R. 406 to 412.)

He would say that the thrombus from which the embolus came was not in the aorta itself nor in the vena cava itself but it came from a thrombus somewhere.

At the time of his examination, Mr. Hennessey did not have a spastic condition in his left leg but he had the

contractions which were described and the changes in the tissue locally and spasmodic twitchings or contractions of the left leg were described to him.

In Dr. Allard's opinion the cause of the spastic condition was that there had been a tremenduous insult to all of the tissue below the level of the occlusion of the artery which had altered their responses and reactions tremenduously. It was his opinion that the spasticity is an unusually great amount of stimuli flowing up the nerves through a spinal reflex arc and contracting the working, functioning muscles in that extremity. He attributed some connection between the spasticity and the fact that there was an artery struck by the embolus on January 7th rather than a vein.

An artery is carrying nutrition, the materials are going to keep the cells alive. Therefore, when an artery is occluded, the cells and tissue to which the blood vessel carry nutrition are going to change, except for those portions that pick up collateral circulation sufficiently; they die or partially die, which is a violent change. The thrombus or embolus forming in a vein, causing a damming back of the venous blood, and the arterial blood is still flowing into these tissues, therefore they are receiving nourishment but there is a back pressure on the return of the used blood from that area; and therefore, because of these violent insults to these tissues which changes nerves, arteries, muscles in there and everything in there, the skin, the responses from that are no more normal in the nerves than they are in the muscles which are contracted there.

His thinking as to why this is an artery and not in a

vein is that there was a sudden onset of changes in these extremities for a few minutes, changes in the sensation which Mr. Hennessey felt and a short while afterwards severe pain, which, as he understood was sufficiently severe that his recollection of quite a period of time was quite hazy. A short while after that Dr. Stokoe's notes reveal a definite distinct pallor or whitish discoloration of this extremity, with no palpable arterial pulsations below this level. Opposed to the type of course which occur if the occlusion were in the vein, which would produce swelling, and the pain, if any this early would be much milder, in fact would probably be fairly mild and would tend to eventually develop a bluish hue to the leg if the occlusion were high.

The growth of the thrombus would vary with the person and condition of the blood. As to why the embolus was as large as it was, large enough to block off both right and left arteries he thought an embolus in an artery, at least at that time you also get a spasm of the artery. The caliber of the artery is controlled by two opposing sets of nerves, the sympathetic and the parasympathetic nerves, with the sympathetic nerves being the contractors and an embolus, being an irritating factor, immediately associated with the lodging of this produced and arterial spasm as a reaction to the irritation.

Therefore, while the saddle embolus was lodged in the bifurcation of the aorta, while it wasn't huge enough to completely occlude both arteries, the vasospasm and the arterial spasm produces the changes in both extremities. (R. 415.)

DR. C. H. HORST

An admittedly qualified physician and surgeon, residing at Butte, Montana, has been following his profession for about fifty years. He is a graduate of John Hopkins Medical School, spent a year in John Hopkins Hospital as an intern; spent a year at the Montana State Insane Asylum, afterwards was in charge of the City Hospital at Butte, Montana, for five years; Later went into general practice; in 1900 took a course in pathology at Boston, Massachusetts and he has made frequent trips to New York to see good surgeons operate and to the Mayo clinic innumerable times to look on with patients.

He has studied the question of thrombosis in blood vessels and has had quite a good deal of experience.

He previously met the appellant and made a complete physical examination of him.

For a study of the facts of the case, he had the patient, took his history and the history consisted of carrying Mr. Hennessey from the time he began to get sick until he reached his present state, and he went into his family history and reviewed the history in relation to past accidents that he had sustained; then Doctor made a careful examination of his history regarding this man that fell on him; then made his own examination of the plaintiff and made his conclusions on the case.

During his study of the case, he had the benefit of a study of the Deaconess Hospital Record, exhibit Number 2 and also a study of St. James Hospital Record being the case where as a young man appellant had nephritis. Exhibit 5. (R. 193 to 197.)

On the day of the examination he reviewed the St. Vincent Hospital Record Exhibit 1-A the laryngitis episode Nov. 29th to December 4th, 1949 a few weeks before the catastrophe. (R. 197.)

He saw Mr. Hennessey twice. He came in one day and told him about his case and was examined. Two or three weeks later on January 10th 1953 he gave him a further examination, took his history and studied the case and reported the case afterwards and reviewed all of his history as it was given. (On page 200 et seq the doctor relates the history in detail; it consists of six pages then subsequently relates further the substance of his examination continuing with great detail to his conclusion (R. 197 to 228.) We respectfully invite a review of this by the Court.

Doctor found from his examination that appellant had a lame leg, the calves of the legs were painful; his chest was normal; the lungs were normal and breath sounds clear with no rales or noises in chest; there were no friction rubs both right and left lungs normal; the heart was of normal size, the pulse was regular; blood pressure normal 120 over 80; the abdomen was apparently normal, (R. 212 to 214.)

On the neurological examination the knee jerks, left, were very responsive and very active and, graded on a rule of four plus maximum, it was three plus. Which is very important. The right knee jerk was moderately active, it was two plus. There was no sensory disturbance although in the course of the examination patient's foot jerked convulsively at one time completely involuntary for a few seconds. Deep pressure on the middle calves behind were very painful. There was no change or hard places

in the artery that extends from the groin to the knee—the femoral artery. He got the pulse up here (indicating). The artery wall was normal. The popliteal artery in the space behind the knee, the lower part of the femoral artery which goes into the tibial artery in the leg, which is a very important artery to feel, which will come up in this case, which is the artery on the back of the foot, the dorsalis pedio artery, was felt and it pulsated and it was normal and there was no thickening of the artery. There was no thickening of any arteries to indicate that he had an arterio-sclerotic condition.

Reviewing the history, the examinations, the various hospital records, the study of the case by Dr. Horst, he concluded that Mr. Joseph P. Hennessey, the appellant has had a thrombus of his inferior vena cava, that he has suffered from emboli to his spinal cord causing anoxemia and thrombosis to some vessels in the spinal cord, resulting in disturbed spinal reflexes.

That this condition was caused by the man falling on him in the Pocatello Airport on the date specified here, June 2nd, 1949.

He makes explanation of his diagnosis and conclusion as follows:

The crux of the question where the embolus started? Was it on the arterial side or was it from the venous side?

Ordinarily, all emboli, most of the emboli, do come down from the arterial side but this is an unusual case and the emboli, in my opinion, is here on the venous side at the junction of the vena cava and iliac veins. It formed right there and it formed as a result of this accident.

Now, the history shows that the man first had a pain in his left leg when he got up out of bed on January 7th, 1950, and the leg was struck numb and then afterwards when he went into the bathroom and came out got a terrific pain and the pain then developed in his right leg.

The question is how did the thrombus develop here?

That thrombus is an intravascular affair which develops within the vessel itself, and, of course there has to be something extraordinary happen to have the blood coagulate in the vein, because none of the blood in a normal individual does coagulate in a vein or artery.

So in order to explain that, when this man fell and his body struck Mr. Hennessey on the shoulder, he hit him on his right shoulder, and he was unprepared for it and, of course, it caused a distention of all these vessels, and, of course, the vessels can stand just so much pressure, and they will get a crack in the lining which is called the intima, or they get multiple cracks in it or it may be in this place, contusions because when the force of the body falling on Mr. Hennessey was transmitted through his body, it caused a congestion or distention of all of these vessels and veins. Alright. So, if a vessel has a crack in it or it has a multiple contusion in it to cause the intima to split from the wall in the intima come a ferment. It is called thromboplastin. So, the moment that the crack or contusion develops, then the blood—certain elements of the blood go to seal that condition in the vein that is involved.

Now, those blood elements that go to seal the injured vessel, the principal ones are platelets, thrombocytes and leukocytes, or thrombolysins and are sealed by the throm-

boplastin. So, that is the manner in which the thrombus developed and that is how it happened to be here.

Now, then, in my opinion, that is the way I have worked it out. It is what they call a bland thrombus and it sticks on the wall of the vessels.

Now, in order to explain this thing, his blood goes up and I say that the thrombus went down and that is the difference. As it went down that first part of it went here on the left iliac vein, and then afterwards a portion of it went down on the other side.

Dr. Horst then introduced a case from a book which was written by a great English Surgeon and the book is called "Applied Anatomy". It was published first in 1883 and there have been frequent editions of it.

He introduced this history to explain why that thrombus was on the vena cava and why it split and takes portions of it from the history to explain it. This is the history:

"As a young man Dr. Pollock won the University 120 yard hurdle race in sixteen seconds, making a record. He held his breath throughought the race and collapsed when the tape was passed. Holding the breath dams the blood back in the great veins. The heart and pulsating muscles in such a race must force the blood onwards into the great venous trunks, with the result that the inferior vena cava becomes over distended, damaged, perhaps thrombosed, and then finally occluded generally. The veins leading from the groin to the axilla at best become extended and varicose and thus taking the place of the inferior vena cava.

Now, the reason—throughout his life Dr. Pollock remained an invalid and had to wear elastic supports, the

renal veins were also occluded, but communication between the renal and subperitoneal veins opened up, the kidneys, however never working as in health."

Now, Mr. Hennessey had this body fall on him 120 pounds, from eight to ten feet above him and I conclude that these veins became terribly distended by the pressure of this man falling on his shoulder and back.

The aorta, being a very strong, powerful vessel, the least to withstand this pressure would be the vena cava. The vena cava was completely full of blood at the time; The pressure was so great that it interfered, causing a crack in the intima, it caused a general contusion of the lining of the lower portion of the vena cava, including a portion of the upper portion of each of the iliac veins, so, when these platelets and thrombocytes went from the blood to seal that injury it built up these lymphocytes and leukocytes that gradually built up until he had a thrombus that occupied the bifurcation of this vena cava and some of the clot went in the left iliac vein and some in the right and when that boy got out of bed those clots broke loose and that explains why he had a thrombus and why he had this subsequent trouble in his leg. (R. 228 to 232.)

If he had a thrombosis on the arterial side, it couldn't get into these veins because as these vessels go down they divide and subdivide and finally get into little plexuses or capillaries, a big thrombus couldn't get through and a venous thrombus in the vena cava could not come down from the arterial circulation. It couldn't be explained and neither could I explain the formation of the clot on the venous side unless I knew about the pathology there.

Appellant had an injury to his vena cava caused by the man who fell upon him and nature tried to cure it by piling up the proper cells that went to seal it.

Dr. Horst then relates from the hospital record how the attending physician and the defendant's witness concluded that it was an embolus that arose from the arterial side and shows how emboli arise on the arterial side.

They come from the heart which has to have a disease and a condition called endocarditis where little deposits pile up in the heart become big and very fragile and they liberate when the heart beats, get into the blood stream, come into the kidney and into the spleen or they might go into the legs.

In case the aorta was injured, it has a very rapid flow of blood and if the vessels in the aorta crack you could likewise get a deposit of thrombocytes or platelets and leukocytes. They could form there, but you see, the blood flows there so quickly it would be wiped off and become a embolus.

Sometimes if it sticks on there it organizes and forms walls of tissue, connective tissue. Cells grow in there and establish it. It is a heavy layer. If an embolus gets loose in the arterial system it either goes down or up to the brain. Dr. Horst then explains the phenomenon of post operative embolism. (R. 234 - 235.)

Surgeons take and put a string around this vena cava and tie it right off and then where does the blood go? It has to go through collateral vessels. Some of these vessels go through, and are continued up into the chest. Your vessels, they are very superficial, they are in the walls

of the abdomen and yet others will go around the veins, the azygos veins they are veins that go alongside the vena cava and make that communication; then there are veins within the vertebral column itself that conduct blood up and astonishing as it may seem, they do just exactly as what this man said. Dr. Pollock lived a long time, but he was incapacitated, but the collateral circulation was established.

Now, that is my idea of this. Now, you can't explain, nobody can tell where the thrombus came from when they think only in terms of the arterial system because it don't work that way. You can't explain it but you do know this that he did have a thrombus and so his leg was injured in it and now he has pain in that leg.

It was a bland thrombus; it had formed slowly for seven months and when Mr. Hennessey got out of bed the pressure of standing erect came down that the formed thrombus loosened and split at the bifurcation of the vena cava and that part of it went down into each leg or iliac veins.

The foot is very difficult to explain because it is paining all the time and still he has got the interference with circulation, so, I think a portion of this thrombus is gone in the leg and that he has a collateral circulation in there now. (R. 236 and 237.)

How could the blood get through if both iliac veins were blocked with the thrombus, answering I will say that as soon as the patient was found to be in a critical condition they immediately gave him heparin and dicumarol and they worked with remarkable results because the right leg cleared up very quickly whereas the left didn't but I

think that is why the man is living today that they used those anticoagulants to free the passage.

Now this clot, this thrombus was right here on the lower end of his vena cava and therefore, when it moved down, it cut off some of those little thrombosed veins and it caused emboli from the thrombus to go back and lodge in the gray matter of the spinal cord, which interfered with certain pyramidal nerves that control the lower nerves, the lower motor neurons—it cut the lower motor neurons off from the upper motor neurons which control the lower motor neurons. Therefore, when the reflexes were tried, they were excessive, they had no inhibition from the brain by the way of the pyramidal tracts and so the consequence was that when I tapped him on the left quadriceps ligament, it was very active, and then further it explained why that leg went into real convulsions.

The history shows that when Mr. Hennessey was in the hospital, his left leg would go into these contractions and his right leg would shoot out against the foot board. The reason for that was that the small thrombi kept invading the spinal canal through these little veins that are even with and attached to the original thrombus in the lower portion of the vena cava. That explains the origin of the embolus from the thrombus in the vena cava.

When those little emboli went into the spinal cord they didn't involve the whole cord, they involved a certain portion of it and they destroyed certain reflexes. That explains Mr. Hennessey's activity of his legs. Then again, they destroyed some of the anterior horn cells that supply the muscles with tonic reflexes, because some of his muscles are partially paralyzed. That is why he has a

paralyzed leg from where the thrombus formed. (R. 238 to 241.)

Appellant's testimony shows that in 1947 he rolled over his automobile and sustained an injury to his shoulder which apparently was cured long before the airport episode.

On cross examination the doctor was asked about this automobile accident and explained that this type of injury, the car rolling over was not to be compared to the airport injury and the witness did not feel that it could have been in any way responsible for his subsequent condition after the airport injury.

He was asked to compare the story of Dr. Pollock related by Dr. Treves in the book with the appellant's case. Explaining, that when Dr. Pollock ran and held his breath he developed a great pressure in his vessels and Mr. Hennessey had a like great pressure in his vessels when the man fell upon him. Doctor Horst explains the weight of a man of one hundred twenty pound "they are the heaviest things I ever saw" when they fall with a greater weight than 120 pounds. When the force came down, it dialated all the lungs, the lungs came down, the diaphragm came down and the intestines came down. That contused the interior of this vessel and split it. The pressure lasted only a few seconds. It would cause the aorta to expand too.

If the two vessels are considered, the aorta and vena cava were both distended with blood and a big pressure put upon them—the vena cava would contuse or split before the aorta because it is a much more stronger vessel (R. 247.) The vena cava would give first.

The blood vessel has to split somewhere; it has to have an injury, so that serum from the tissues has to exude, a thromboplastin and this attracts to it the blood cells from the blood and then they go over this rupture in the vena cava and seal it off, exactly as when you have an injury to the skin of your hand. There is a fibrinous exudate and the next thing if it does not become infected you get a scab. That is the process you have to go through to form a thrombus in the vena cava. (R. 251.)

The aorta has much more flexibility but the vena cava has a limited amount of expansion.

The smaller arteries and veins would not break more readily because they are small imbedded in tissues and the pressure exerts in the larger vessels.

Dr. Horst then explains the left iliac vein and the common iliac vein goes from the bifurcation of the vena cava; the left goes to the left and then down; the right goes obliquely down, more direct by far than the left does which is responsible for the obstruction to the pressure that comes down

The vessels run close together and the aorta being a strong powerful vesesl pressed in on the common iliac vein.

The emboli in this case formed in the vena cava; they don't come from anywhere else and in this case it took seven months to build up and it was quite a clot in there. The history shows that the clot couldn't go up. It was attached to the walls. Then, when he was in bed four days, it loosened up. In the meantime the blood could have gone along side the clot and as it was a very heavy clot it had

to go somewhere. It broke off and went right first and left secondly.

As to the complete occlusion of the vena cava it depends on the individual, the extent of the tears in the intima of the blood vessels and the amount of thromboplastin thrown out in the vena cava and furnished by the platelets and corpuscles. In this case the man did know the thrombus was forming. It was in this big vein and did not give off any sensation.

There was the record of the right upper quadrant abdominal pains which directly connect up the injury and the tragedy.

It didn't say "hello" until January 7th, 1950, because the thrombus was not developed completely to obstruct the vena cava.

In response to a query by the court the witness said concerning the embolus ordinarily following the blood stream: It depends where it comes from. It it appears in the vena side it is difficult to explain because the blood flows up, it doesn't flow down but Hennessey's, when it formed was very very heavy. It involved the whole lower vena cava to some extent and the right and left iliac vein and after seven months was heavy and was attached to the walls. When he was in the hospital it loosened and being heavy enough it gravitated down and choked the veins off.

If it was a little thrombus it could be carried up and would lodge in the lungs.

This thrombus on the venous side is called a bland thrombus and is not so highly organized.

The hard or swollen substances in the abdomen that would crush against the vena cava is the artery full of

blood crushing against the left iliac vein in front of the back bone. It is the likeliest thing in this case. There is nothing else in this case to form that thrombus.

None of the other doctors testifying could give you the source of the embolus. (R. 268.)

As the thrombus developed in the vena cava there were collateral or ancillary veins that take over but in the Hennessey case it didn't show on the surface of the body.

If it develops long enough, that is to say if cells had grown into it, the thrombus, and it had attached itself firmly this collateral circulation would have been established; it was in the process of formation but the veins hadn't become distended enough or the collateral circulation hadn't been established enough to see it on the surface of the body.

The collateral circulation consists of veins that not only extend through the walls of the abdomen but they likewise develop on the Azygos veins that run along side the vena cava and they also drain through the spinal cord.

These veins would not be apparent to the naked eye unless the occlusion was complete as it was in that runner but the blood was certainly circulating along side that thrombus in the vena cava right up until the trouble happened. It was going on the side of it and it wasn't a complete occlusion.

I am of the opinion that the vena cava was partially obstructed up to the three or four inches in length but all the blood got through. There were no symptoms of an occlusion until the time that it happened in the hospital.

I looked all through the literature and Dr. Pollock's history was found in numerous articles. I have attended many

clinics and I have never seen anybody describe the length of time it takes to occlude the vessel.

A Thrombus becomes a part of the wall of the blood vessel providing it is organized and cells grow into it but if it sticks on there by reason of thromboplastin, it is not securely attached to the wall and therefore is more liable to get into the circulation one way or the other. If it was a little thrombus there it could be swept up but in this case it was a heavy thrombus. I tell you why it was: Look at the damage it caused. It was so large that it slipped against the flow of blood. (R. 273.)

You asked if Heparin would dissolve the embolus. The right leg was involved only twenty-four hours. The whole damage was in the left leg and has not stopped yet.

Does heparin dissolve emboli? It has that effect. When they give it it clears the blood vessel walls as it did here. In this case the thrombus was attached to the wall very frailly without scar tissue and wasn't with scar tissue.

Because of the contusion of the wall of the vena cava was so great the thrombus was extensive it involved not only the lower two-thirds of the vena cava but the right and left iliac veins.

Dicumarol that comes from rotten clover and sheep men found there sheep were bleeding to death. It will render the blood fluid and take away the prothrombin element. It helps dissolve and loosen up the clots. (R. 276 - 277.)

The embolus in this case went into the spinal cord because when this thrombus slipped it must have occluded the entrance of the veins that came from the spinal cord because when it went down it had to, so then, it cut that off,

that vein off, which caused congestion in the spinal cord resulting in damage to the spinal cord which explains appellant's spastic leg. (R. 279.)

The occlusion must have been below the spinal cord. The spinal cord is within the spinal canal. There is a plexus of veins within the spinal cord which are very complex. When these little lumbar veins connected with the Plexus veins that surround the horses tail, because these are big nerves that come off of that end of the spinal cord and those emboli got in that plexus of veins and ascended and got into the spinal cord itself. It wouldn't hurt the nerve at all; if it went there it wouldn't go into the nerve but it enters a plexus of veins surrounding the cord. When it gets into the cord it destroys certain nerve tracts.

The tract it disturbs is the tract of connecting nerves which connect the upper motor tract with the lower motor tract; and that wasn't a very extensive lesion and the left leg became spastic. The upper motor neuron is in tact. It controls flexion and the lower motor neuron. Appellant has lost his reflex below and he had the symptom of his foot sticking out.

If the emboli obstruct those veins it interferes with the intervenous circulation, nerve cells die and certain of this man's muscles are partially paralyzed. This is the condition of appellant and he wouldn't have the condition of his left leg if it hadn't happened.

Otherwise he would have a good leg.

He has got a leg partially paralyzed and it is hyper-active; the tone of the muscles is just hyper-active, it is spastic. That means that all the sensory impulses from the leg and foot go up and are turned right back without

any control because of the destruction of the connecting neurons within the spinal cord. (R. 282.)

Dr. Horst rules out the condition of nephritis. (R. 285.)

Concerning the episode of Dr. Pollock, comparing the blood vessels in the two men the witness relates that Pollock was about 21 years of age while Hennessey is 36 years of age and his arteries are a little bit older but the younger man had the worst condition that developed because most of his vena cava was involved. (R. 303.)

The court here takes a very unusual position. He is asking the doctor to find what is practically an exact case from the medical literature as a condition of proof. (R. 303 to 305.)

Later the witness called the attention of the court to a case in the December, 1940 issue "Surgery, Gynecology and Obstetrics with International abstracts of Surgery" for the purpose of demonstrating the reasonableness of his diagnosis in the Hennessey case. (R. 317 to 323.) With further explanation of the damage in the spinal cord the witness relates that when the clot moved it occluded the opening of these small veins into the vena cava and in this disturbance those clots got into the complex venous plexes that surround the spinal canal and destroyed some of the anterior horn cells. (R. 342.)

He explained that this plexus of veins surround the spinal cord from the base of the brain to the coccyx.

COMMENT

A resume of the testimony of the three doctors will certainly convince the Court that Dr. Horst is the only medical witness who completely gave the District Court a reasonable, intelligent and conclusive analysis of the facts of this case.

The attending physician, Dr. Stokoe, was principally concerned with the treatment of the catastrophe which so suddenly appeared and he was not able to find a source of the damage, which admittedly arises by virtue of the blood clot and the consequent interruption of the circulation.

The testimony of Dr. Allard shows on its face that it was based on conjecture and speculation as far as the formation of a thrombus or blood clot was concerned. He shows no text or medical authority to back up his statements and his testimony is always an estimation or presumption.

In this state of this record we urge that there is no medical testimony in the case that arises to the dignity of conflict with Dr. Horst's scholarly and extremely reasonable diagnosis and conclusions.

To sum up the two doctors, beside Dr. Horst, tell the Court "I don't know" Dr. Horst on the contrary gives full explanation, based upon facts.

Where, as here, the decision of the District Court is clearly erroneous the Appellate Court may grant relief.

> "A finding is clearly erroneous when, although there is evidence to support it, the reviewing court,

on the entire evidence is left with a definite and firm conviction that a mistake has been committed."

U.S. vs U.S. GYPSUM COMPANY, 333 U.S. 364, 395; 92 L. Ed. 746, 765;

U.S. vs Oregon Medical Society, 343 U.S. 329; 96 L. Ed. 978;

Kuhn vs Princess Lida of Thurn & Taxis, 119 Fed 2d, 704.

Applied to a consideration of medical testimony we call the Court's attention to the following:

McAllister vs U.S., 348 U.S. 19, 99 L. Ed. 20;

U.S. vs Fotopolus, 180 F 2d 631.

Applied to other situations:

Desch vs U.S., 186 F. 2d 623;

Gutowsky vs Jones, 178 F 2d 60;

Maragakis vs United States, 172 F 393.

EXPERT MEDICAL EVIDENCE

This case is one which, from its very nature, requires the assistance of medical and surgical experts to point the way to an intelligent decision.

We have the following known facts to start with:

The fall of Livingston upon the appelant. The details of which are here before this Court as they were before the District Court.

The fact that it is not disputed that the appellant's damage was caused by a vascular embolus which blocked the circulation in appellant's legs and which resulted in his crippled condition.

The fact that no evidence of disease, which could be responsible for the formation of a thrombus, could be found in appellant's body.

The fact that a month before the catastrophe struck, when appellant would have no reason to misrepresent, in a report to his physician, appellant reported that he had suffered pain in his upper abdomen of several months duration, which was worse on inspiration and on bending forward. This had become markedly aggravated the last few weeks before admission.

The fact that a month later a thrombus which slipped and went down his legs was established by the medical evidence. This thrombus was at the bifurcation of blood vessels in his abdomen.

These known facts were the foundation of the testimony that the fall of Livingston on appellant on June 2nd 1949 was directly responsible for appellants crippled condition which then developed on January 7th, 1950.

We urge that these facts and this medical evidence is abundantly sufficient to establish appellants case and the extent of his damages.

Hartford Accident and Indemnity Co. vs Industrial Commission of Utah, 64 Utah 176, 228 Pac. 753;

Schroeder vs Western Union Teleg Co., 129 SW 2d, 917. (Mo.);

Sullivan vs Boston Elev. R. Co., 185 Mass. 602, 71 N. E. 90;

In De Filippo's Case, 284 Mass. 531, 188 N. E. 245.

The possibility that there might be other causes will not weaken the testimony of an expert who with reason and clear deduction finds the real cause of the catastrophe.

Blanchard's Case, 277 Mass. 413, 178 N. E. 606;

Glen L. Wigton Motor Co. vs Phillips, 163 Okla. 160 21 P 2d 751.

These 10 histories in the Crane article show that thrombi can develop in the large veins of the legs following strains by falling off scaffolds, helping to lift heavy weights, etc. The veins affected in this list are mostly the iliac, vena cava, femoral, popliteal, femoro-ilac veins. The pressure on these veins was from the feet *up*. The pressure in Hennessey's from the shoulder and back *down*.

The thrombi in these cases have all developed after severe strain on the full veins of the lower extremities and vena cava. The strains were not long continued, as in the Dr. Pollock case of 16 seconds. They were short and brief strain, such as was present in the Hennessey case.

Edema, swelling of the legs, appear quite *frequently* in these cases. The pressure was from the feet up. The peripheral veins are numerous and smaller than the vena cava. There was *no swelling* in the Hennessey case at any time. The pressure was from above down. Vena cava is large at the bifurcation. The thrombus in the Hennessey case took 6½ months to show signs of its presence. It began with a feeling of fullness and heaviness in the upper abdomen and chest, cough and hoarseness. The second attack of this kind developed 28 days later with practically similar symptoms but a little more severe as broncho-pneumonia was one of the diagnosis made. In this interval of 28 days Hennessey never felt well. Chest and upper abdomen felt full and distressful.

The following case illustrates how a contusion of the chest may be followed by a thrombus in the inferior

vena cava and left iliac vein following an interval of two weeks. This case is taken from a book entitled "Trauma in Internal Disease" by Dr. Stern, page 177.

"A farmer, 63 years of age and previously in excellent health, fell from a cart and struck his chest on an iron chain. He at once became short of breath and complained of thoracic pain. A physician was called in and made a diagnosis of pulmonary emphysema. Two weeks later, the man ran a temperature and suffered severe dyspnoea. A diagnosis of lobar pneumonia was made. Two weeeks later the patient died. Post-mortem: Thrombosis of the inferior vena cava and of left internal iliac vein, the pulmonary artery was obstructed by an embolus; the left 5th, 6th and right 7th ribs were fractured. The court acknowledged that death was caused by the fall and was, therefore, compensable."

Cases developing thrombosis on the venous side of the circulation are difficult to find in medical literature, as was told Judge Murray when he demanded recent examples of thrombosis after the Dr. Pollock case was introduced in the trial.

In Chapter 14, Page 176 in Dr. Stern's book of "Trauma in Internal Disease", published in 1945, the following remark was made: "Our subject is limited to the traumatic thrombosis of the *major veins,* which is extremely rare."

Dr. Crane found 10 cases from 1930 to 1952.

Dr. Stern states major vein thrombosis are rare.

A review of the few cases of venous thrombosis presented in this paper, the varied manner in which they formed from intravascular pressure, the time of the appearance

of symptoms from immediate to long drawn out years, the scarcity of cases of thrombosis in the medical literature on the venous side demonstrate that there is no regular set type by which venous thrombosis of deep veins can be recognized or the time the symptoms of thrombosis may appear.

Dr. David Starr Jordan, President of Stanford University, once remarked in a lecture that "no two leaves on a tree were just alike." This also applies to injuries of veins.

Thrombosis of veins are intimately associated with *collateral venous systems* which afford channels for the passage of blood when the main caval system is obstructed by thrombi.

As Judge Murray, in the Hennessey case, has used an example of a collateral channel that did not appear when a thrombus of a deep vessel existed to support one of his reasons for denying Mr. Hennessey's claim for injuries sustained at the airport in Pocatello, Idaho, June 2, 1949, we wish to explain the function of collateral systems.

THE COLLATERAL CIRCULATORY SYSTEMS

A sudden complete obstructive lesion of the *arterial or venous system* at the bifurcation of aorta or vena cava would cause vaso-spasm of the blood vessels below the obstruction.

In the Hennessey case, the obstruction was at the bifurcation of the vena cava because there was no vascular lesion in the arterial system to account for the presence of such an obstruction. Since that is the acknowledged fact it follows that the lesion was in the venous system located

at the bifurcation of the vena cava. Further, this location was determined by the history of this case. Both legs were involved.

The obstruction took place while the patient was in the Deaconess Hospital on the morning of Jan 7, 1950. Mr. Hennessey was getting ready to leave the hospital for home. He had just recovered from a second attack of broncho-pneumonia and laryngitis! (We think he had a pulmonary embolus, not broncho-pneumonia.)

He suddenly suffered a severe pain in his lower back, both legs turned bluish white and cold. Heavy sedation and anti-coagulant treatment was instituted immediately. Within 1½ hours the color was restored to both legs, pain was lessened, no edema of the legs was observed and free passage of blood through the vena cava was therefore resumed.

The heart was beating during the 1½ hours of the attack. The blood was circulating through both the venous and arterial systems. Some of the venous blood must have gone through the bifurcation of the vena cava where the obstruction was because there was no marked swelling of the legs or feet reported. Dr. Stokoe reported in his notes Jan. 8, 1950, that "the area of gangrene was apparently decreasing with the anti-coagulent therapy." (R. 147.) But other channels than the vena cava for the Blood to by-pass the obstruction at the bifurcation of the vena cava were available.

See Appendix following last page for illustrations.

The important collateral system or channel in this case is the vertebral column of veins that parallel the caval

system. In the 26th edition of Gary's Anatomy is a good description of this channel which is copied and presented here. (See Gray's Anatomy, 26th ed. p. 743,) and named *Channel I.*

CHANNEL No. I.

"According to Batson (194) the veins of the vertebral column constitute a system paralleling the caval system. He reached this conclusion as a result of X-ray studies of human cadavers and living animals. A thin solution of radiopaque material which he injected into the dorsal vein of the penis in a cadaver found its way readily into the veins of the entire vertebral column, the skull, and the interior of the cranium. The material drained from the dorsal vein of the penis into the prostatic plexus and then followed communications with the veins of the sacrum, ilium, lumbar vertebrae, upper femur, and the venae vasorum of the large femoral blood vessels, without traversing the main caval tributaries. Similarly, material injected into a small breast vein found its way into the veins of the clavicle, the intercostal veins, the head of the humerus, cervical vertebrae, and dural sinuses without following the caval paths. *Thorium dioxide injected into the dorsal vein of the penis of an anaethetized monkey drained into the caval system when the animal was undisturbed, but if its abdomen was put under pressure with a binder, simulating the increased intra-abdominal pressure of coughing or straining, the material drained into the veins of the vertebrae.* Batson believes that the spread of metasteses from tumors and abscesses, in many cases such as the metastases to the pelvic bones from the prostate, can

be explained only through the channels of the vertebral venous system and its extensive communication with the caval system. When the pressure within the thorax and abdomen is increased by coughing or straining, the blood may flow along the vertebral system rather than the caval and it may even be forced into the vertebral veins from the viscera."

(This proves the cause of the paralysis and spasms in the legs as explained by Dr. Horst.)

Channel No. 2. Anastomosis between lumbar veins and ascending lumbars of the azygos system.

Channel No. 3. Anastomosis between the superior and inferior hemorrhoidal veins.

Channel No. 4. The thoraco-epigastric vein connects the superficial inferior epigastric with the lateral thoracic vein.

Channel No. 5. Anastomosis with the portal system.

Channel No. 6. Subperitoneal veons. The Dr. Pollock case.

The Court will take judicial notice of the structure of the body 31 C. J. S. Sec. 79, Page 662.

At 9:00 a.m. Jan. 7, 1950, the first attack of back pain and veno-spasm in Hennessey took place in the Deaconess Hospital in Billings, Mont. Within 1½ hours it was stopped by heavy sedation and anti-coagulants. Six and one half (6½) hours later the second attack took place. There was an acute pain behind the left knee, extending down to the great toe and heel. Legs became white and cold (veno-spasm.) Heavy sedation and anti-coagulants relieved the condition again. The patient was heavily sedated. The left leg was extremely painful. Left leg went into spasms

that lasted five to 10 minutes. Attacks of this kind called for "hypos." This condition lasted the entire time he was in the hospital and even now they come on, day or night.

It was when these spasmodic muscular contractions began that emboli from the thrombus in the vena cava and iliac veins were loosened up and conveyed by Channel No. I to the spinal canal. Emboli in the venous capillaries of the spinal cord caused minute thrombi to form. These thrombi caused involuntary contractions of muscles in the left and right legs.

Nerve stimuli which normally maintain the tone of the leg muscles together with irregular nerve stimuli arising from the thrombus in the space behind the left knee (popliteal space) poured abnormal nerve stimuli into the spinal cord.

The lower spinal cord in a hypersenstive condition probably disconnected to some degree from the pyramidal system of the brain which controls it, responded excessively to this stimulation. The irregular appearance of the spasms were the result of the disordered nervous mechanism caused by the emboli from the thrombi in the vena cava, the two iliac veins and the thrombus in the space behind the knee (popliteal space.)

The muscular painful spasms which kept up for two and one-half months in the hospital and approximately a year and one-half since leaving it, were involuntary. The lateral spino-thalmic tract which conveys sensations of pain is located ventro-lateral to the anterior horn of the gray matter of the spinal cord. The proximity of these units explain the cause of the pain that is associated with these involuntary spasms.

The pain, swelling and blueness of the left leg, inability to walk more than a block or two, from which Mr. Hennessey has suffered since leaving the hospital, and from which he continues to suffer, is due to the thrombosis of the veins in the space behind the left knee (popliteal space.)

CAUSE AND EFFECT

After a careful consideration of the foreging facts and the law, we approach the question of the result of the defendant's negligence and we study the effect of Mr. Livingston's fall upon the plaintiff.

To appreciate the weight of the falling body, we try to lift a ninety-eight pound sack of flour and it was forcibly brought home to us when lifting this weight what it means to have a one hundred and thirty pound man drop through a twelve foot ceiling and strike a human being.

We earnestly contend and say to the court that the shock of this fall upon the plaintiff was tremendous and it is slightly less than a miracle that the plaintiff wasn't crushed by the force.

If Livingston was upright the center of gravity of his body would be approximately three feet above the plaster board that he stepped on as he fell and we call the court's attention to the fact that his weight fell through space approximately ten feet.

Livingston sustained a slightly brused knee falling on a concrete floor fifteen feet below his center of gravity and this surely is evidence enough that the plaintiff absorbed the shock of this fall with his body.

Therefore, we sincerely say that there is nothing in the evidence of trauma to the plaintiff that remotely compares

with this force crushing downward against his body.

We recall that one of plaintiff's physicians testified that the rolling over of an automobile created a force entirely different.

We are looking at the small figures to the left of the central figure shown in the bodyscope (plaintiff's exhibit 7) which show the arteries and veins in human figures and we visualize what the doctors call the vascular tree.

We contemplate the position of the descending aorta and the ascending vena cava as they are placed side by side at their respective bifurcation in front of the spine surrounded by the intestines and the abdominal organs.

We contemplate the effect of the shock of this force applied to these vessels filled with blood and we urge the reasonable probability, in the light of subsequent events, of damage to the walls of these blood vessels.

Such is the reasonable diagnosis of the only medical expert testifying in this case after a profound study of the entire history of plaintiff from birth with relation to cause and effect.

When the end result is the same what difference does it make whether the clot plugged the aorta or the vein, the exact determination of which must rest at some future date upon the results of an autopsy.

All physicians who have testified in this case agree that as to his crippled legs the plaintiff's physical condition has been brought about as the result of vascular damage caused by a blood clot and the consequent interruption of the circulation.

We have learned from the study of this case that the formation of a thrombus results from deposit of fibrin

platelets at the site of an infection or an injury to the blood vessel which is called an agglutinative process.

The sources of thrombus from disease have been ruled out by the physicians and the contemplation of the entire testimony will show that there is NO EVIDENCE OF DISEASE which would cause a thrombus to form. Therefore, in all reasonable probability the thrombus or thrombi, involved in this case, had to result from trauma to the blood vessels.

And the history of this case, as shown by the evidence, demonstrates that with reasonable probability the trauma to the blood vessel occurred when Livingston fell upon the plaintiff.

The attending physician was concerned with the symptoms and the treatment of the patient more than with the cause and inception of the condition he was suffering from.

The expert of many years experience, after thorough study and analyses of the case, has given us his opinion based upon the complete history, a complete search of the hospital records and a thorough study of the literature, that in all reasonable probability the plaintiff's condition is the result of the man falling upon the plaintiff on June 2nd, 1949.

Realizing that we have the burden of satisfying the court by a preponderance of the evidence of the truth of our position, we start with the premise:

> "The law does not require demonstration; that is, such a degree of proof as, excluding possibility of error, produces absolute certainty, because such proof is rarely possible. Moral certainty is only required,

or that degree of proof which produces conviction in an unprejudiced mind."

Sec. 93-301-4, R. C. M. 1947.

This section must be taken in connection with another section of our codes directing the jury to be instructed:

"That in civil cases the affirmative of the issue must be proved and when the evidence is contradictory the decision must be made according to the preponderance of the evidence; that in criminal cases guilt must be established beyond a reasonable doubt."

Sec. 93-2001-1, R. C. M. 1947, Subdivision 5.

We believe that the Judges of this court, while engaged in the practice have frequently encountered clients who have suffered a compressed fracture of the vertebrae of the back by falling a few feet in a bent over position.

We recall a case of a miner who fell a distance of ten feet landing on his feet and pitching forward who sustained a compression fracture of one of the lumbar vertebraes.

This force is certainly comparable to the force we have to deal with in the case we are considering.

If such a force could crush the compact bony body of a vertebrae, we certainly should conclude that a similar force could damage the walls of the blood vessels.

For all practical purposes the plaintiff was a normal, healthy young man and the circulation of the blood insures that his veins and arteries were filled with blood at the time that he received the shock of the man falling upon him.

Searching through five Decennial Digests, we were unable to find one exactly similar case as regards an accident similar to this one. Therefore, reasonable comparison should aid the court to prove to them that vein damage has occurred in comparable accidents. We do not believe that the court would insist on finding an exactly similar occurrence in medical history before the court would be convinced of the cause and effect in this case.

If we demonstrate by medical histories that comparatively slight effort or strain have caused the development of thrombus in a blood vessel, then the court should be satisfied that a strain has produced a condition in the lining of a blood vessel which resulted in the propagation of a thrombus.

And consequently the court can reasonably conclude that an opinion of a medical expert that the severe shock shown in the evidence in this case damaged a blood vessel and resulted in a thrombus which with reasonable probability has caused plaintiff's disability, is abundantly supported in medical experience.

Therefore, we find in our limited medical libraries the April 3rd, 1952, issue of "The New England Journal of Medicine" in which issue, commencing at page 529, we find an intelligent discussion by an eminent surgeon of case histories where such damage has occurred and on page 531 a table listing ten cases, comparatively recent, where the vein damage has occurred in the deep veins, some in the vena cava.

These should convince the court that the opinion of the expert is supported by a respectable number of medical histories.

On page 318 to 323 of the record, Dr. Horst relates the case history which is strikingly comparable to the case we are considering of the plaintiff.

In passing, as we contemplate all the medical testimony in our present analyses, we recall the testimony of one of the doctors to the effect that a thrombus would occlude a vessel regardless of size in a period of fifteen days.

We also recall "The tongue in cheek" attitude of counsel with respect to a blood clot slipping down from the bifurcation of the vena cava and producing the embolism with which we are concerned.

In our study of this case we have encountered two definitions gleaned from Stedman's Medical Dictionary:

> "Fibrinous thrombus: One formed by repeated deposits of fibrin from the circulating blood; *it usually does not completely occlude the vessel.*" (emphasis supplied).
>
> "Retrograde embolism: The plugging of a vein by a mass carried in a direction contrary to that of the normal blood current."

We are handicapped in Montana by the lack of a complete medical library. We are sure, however, that this was not the case with Thomas Lathrop Stedman, A.M., M.D. in his preparation of his medical dictionary which we believe has gone into the fourteenth edition.

He disagrees with Dr. Allard who testified as we have above referred to.

Likewise retrograde embolism appears common enough to be included in a recognized medical dictionary.

It manifestly appears from the evidence that Mr. Livingston fell upon Mr. Hennessey a direct blow. (R. 58-63.)

As he came through the ceiling he was hurtling through space. Upon coming in contact with Mr. Hennessey the shock of the blow was applied against the plaintiff's body as he fell directly upon his neck and shoulder and across his back; thus the entire force was crushed upon the plaintiff. After the shock was applied Livingston slid to the floor and his contact with the concrete floor left Livingston with a slightly bruised knee.

Mr. Hennessey bending over the wash basin, a normal, healthy individual with a normal heart for a young man of his age, with healthy blood vessels filled with blood, absorbed this tremendous shock.

The Inferior Vena Cava with a column of blood moving upward and beside the abominal Aorta with a column of blood moving downward compressed together from the position of his body.

Subsequent events demonstrate that either or both of these main blood vessels were damaged by the surge of blood against the folds of the vessel and we have the source—the only source—appearing in the evidence, which produced the thrombi which developed into the large saddle clots at the bifurcation of the blood vessels.

"The outstanding connecting link in the history of this case between the injury and catastrophe appears in the evidence a month before the embolism struck.

On November 29th, 1949, in St. Vincent's Hospital, the plaintiff was suffering from acute laryngitis. His history was taken. Plaintiff complained of left anterior chest pains and *abdominal pains in the right upper quadrant of several months duration—worse on inspiration and on bending*

forward—markedly worse the past few weeks. No hemoptysis—no spitting of blood or bleeding from the lungs or bronchial tubes. (Defendant's exhibit 1 — personal history.)

Here we find the pain reaction to the gradually propagating thrombi which grew in the blood vessels following the injury and brought about the catastrophe.

Following the injury of June 2nd, 1949, the thrombus was forming in the blood vessels.

Inhalaton draws blood into the lungs from the veins; bending over forward causes pressure on the deep abdominal blood vessels.

Thus the symptoms mentioned in the history given at St. Vincent's Hospital are accounted for. (Defendant's exhibit 1-personal history.)

A considerable discussion arose during the trial of this case, because, in seeking an illustrative medical history to demonstrate how pressure in a large vein could cause damage resulting in Thrombosis, one of the doctors testifying had brought a reference to an instance of a young college student, Dr. W. Rivers Pollock, who held his breath in a foot-race for one-fourth of a minute while in strenuous effort.

Comparisons between Joe Hennesey's case and that case history were discussed and, we submit in all earnestness, that the witness supported his position with cogent reasoning.

When we consider Pascal's law, to the effect that pressure applied to an enclosed fluid is transmitted equally in all directions and acts with equal force on equal surfaces,

the force applied against a venous wall will damage any point where the vessel would be pinched or confined such as the bifurcation of the vessel adjacent to muscular folds and a near bursting force is created that will damage vein or artery wall.

The court, indicating a desire to have the aid of some more medical histories, called attention to the fact, that in the then state of the record, there were but two instances shown of thrombus formed in the vena cava.

While the court's position was technically correct, we were chagrined because of the court's attitude toward this testimony. If the two cases are good cases they are entitled to favorable consideration. If the atom bomb, which was exploded at Hiroshima, was the first instance of such a phenomenon, it was none the less destructive.

We are sure that our witness, of great experience, has been an earnest, outstanding student, who has done intensive research and study while working at his profession.

The fact that our witness did not have, available in court, a number of similar case histories did not support the conclusion that, in medical experience, there were but two — Dr. Pollock's and Joe Hennessey's.

On the contrary between the first and second sessions of the trial, we have submitted case histories of more than twenty instances where veins were damaged by pressures, effort and strain which we have referred to heretofore in this memorandum.

As the witness explained the reason for the case history of Dr. Pollock was to illustrate what pressure would do to a blood vessel, even though the pressure on the blood

vessels in Dr. Pollock's case was caused by the force of the heart pumping against the holding of his breath while the pressure on the blood vessels in the Hennessey case was caused by the force of Livingston's fall on the plaintiff. In each case the blood vessel was damaged resulting in thrombosis.

A force from the north is no different than equal force from the south.

The case histories listed at page 529 et seq of the New England Journal of Medicine, while not cases on all fours with the Hennessey case, nevertheless demonstrate how thrombi have been caused in blood vessels under comparable circumstances. For instance if a man falls seven or four feet and lands on his feet and suffers a deep venous thrombosis of the iliac veins and the vena cava the reverse instance, of a man falling seven feet upon the body of another man will also cause thrombosis of the vena cava and the iliac veins.

A force pushing upward from a fall on the feet is certainly no greater, if as great, as a force pushing downward from the shoulder and neck.

In the legal profession, where we deal with legal principles and have the benefit of hundreds of thousands of recorded cases in our Reporter and Case Systems, we sincerely doubt if there are ever two cases found exactly alike in every particular. Nevertheless, thousands of cases are decided by comparative reasoning. Yet the District Court insisted on an exactly similar case before being convinced.

Therefore, in presenting our case we believe that the accepted practice is for a medical expert to testify and

give his opinion based upon the history and study of the case, as to cause and effect for the purpose of aiding the court to deal with a branch of science with which courts and juries are usually not familiar, relying on the learning and experience of the expert to present us with the end result we are seeking.

Thus they bring with their considered opinion, all learning, experience and the case histories of their profession as studied, compared and applied to the case at issue.

The case of Dr. Pollock appears to be a more severe injury than the case of Joe Hennessey. We doubt if Joe Hennessey's blood vessels are completely occluded to this day. From the symptoms, with reasonable certainty, collateral circulation canalization or by-passing has taken place in Joe Hennessey's veins and arteries.

With Dr. Polock his vena cava completely occluded, which was proven by an autopsy after his death. Medical Science had the benefit of Dr. Pollock's case history from its inception throughout the remainder of his life and through post mortem after his death. His case has been outstanding and referred to a number of times in the texts to prove the point.

We sincerely urge to the court that the illustration was apt, compelling and pertinent and reasonable correlation among the case histories now before the court and a consideration of the evidence in this case should convince the court that our position is strong and sustained with reasonable certainty.

From the very nature of this case, that is an injury to the lining of a blood vessel, it is very difficult for medical

science to point exactly to an injury or condition and say "here within this blood vessel it is."

However, doctors have learned to reason from symptoms to arrive at their conclusions.

As we have heretofore mentioned whether this thrombus was in the veins or the arteries or whether there were thrombi in both, is immaterial to the determination of this case because as far as the damage to the legs are concerned the end result would be the same. (R. 316-359, et seq.)

With full contemplation of this case we suggest to the court that the evidence shows beyond question that the plaintiff suffered with severe vascular damage originating with a thrombus in a blood vessel or the blood vessels. The attending physician has ruled out infection, damage to the heart or damage to the lungs as possible sources of emboli; that the clot was too large to have come from smaller blood vesels in the body and that there was no deformed condition in the plaintiff's heart that would permit a large clot to come through the heart and by-pass the lungs.

The evidence is that the plaintiff's blood vessels were in excellent condition.

No doctor testifying in this case considered the history of nephritis as a source of emboli. One doctor suggested that the hospital records of the nephritis case at St. James Hospital indicated that the principal function of the kidneys were active and working and a study of the record will show that very slight residuals remained in recent years.

A fair resume of the evidence discloses that disease and infection has been eliminated. The automobile accident has been eliminated for all practical purposes.

The evidence therefore leaves the injury of June 2nd, 1949, as the proximate cause of the plaintiff's bodily injuries.

This conclusion is further sustained by reasonable analysis of all of the evidence, medical and otherwise.

It then becomes the duty of the court to find for the appellant and against the appellee in this case.

The testimony of the doctor who made a most thorough study of all the medical history of the plaintiff and all the hospital and medical records, together with an exhaustive and complete physical examination on his own account, has definitely stated that in his opinion the fall of Livingston upon the appellant is entirely responsible for the injuries which appellant recived.

We submit some lllustrative cases:

In a well reasoned opinion Circuit Judge Phillips discussed a case where an eleven year old boy had a pipe which extended from the defendant's oil well fall across his shoulders, and subsequently suffered a tuberculosis of the bone, used the following language:

> "The medical expert stated that tuberculosis of the bone usually is caused by trauma which lowers the vitality and resistance of the tissues and makes them susceptible to a tubercular infection already present in the system. He stated that strong pressure on a joint or forcing it out of normal position may create a condition making it susceptible to tubercular infection. He stated that tuberculosis of the bone usually develops slowly and that the condition he found in Colvard had probably been progressing for two or three years.
>
> In answer to a hypothetical question which embraced the facts above detailed respecting the accident, the

ensuing history, and the facts he found upon his examination, the medical expert stated as his opinion that the tubercular condition in the spine and left hip joint was caused by the injury Colvard received on April 20, 1932. He stated that the impact and weight of the pipe exerted an indirect force upon the dorsal spine and the hip joint resulting in injury thereto and making them susceptible to the tubercular infection present in the system of Colvard; that tuberculosis of the bone usually develops first in the spine and then in the hip joints, and that Colvard's injuries were permanent.

There facts were clearly sufficient to take the case to the jury and we conclude that the court did not err in denying the motion of the Champlin Company for a directed verdict."

Champlin Refining Co. vs. Thomas, 93, Fed. (2nd) 133.

The foregoing case illustrates that the opinion of the medical expert witness relating to cause and effect of trauma and the resulting physical condition of a plaintiff is held to be sufficient evidence to establish the facts testified to by the expert.

See also:

Oklahoma Natural Gas Co. vs Kelly, 153 Pac. (2nd) 1010.

A salesman was bitten by a wood tick and died and the Supreme Court of Idaho used the following language in considering whether or not he was entitled to Workmen's Compensation:

"This court held in the well considered case of Newman v. Great Shoshone & Twin Falls Water

Power Company, 28 Idaho, 156 P. 111, that 'in a civil case it is not necessary that the facts which the verdict is based be established beyond a reasonable doubt. It is the duty of the jury to decide according to the preponderance of the evidence and the reasonable probability of truth.' And in the case of Adams vs. Bunker Hill, etc., Mining Company (on rehearing), 12 Idaho 637, 89 p. 624, 628, 11 L. R. A. (N. S.) 844, this court said: 'There are very few things in human affairs and especially in litigation involving damages, that can be established to such an absolute certainty as to exclude the possibility, or even some probability, that another cause or reason may have been the true cause or reason for the damage rather than the one alleged by the plaintiff. But such possibility, or even probability, is not to be allowed to defeat the right of recovery, where the plaintiff has presented to the jury sufficient facts and circumstances surrounding the occurence as to justify a reasonable juror in concluding that the thing charged was the prime and moving cause'."

Roe vs. Boise Grocery Co., 21 Pac. (2nd) 910 at page 913.

The following case from the Supreme Court of Wisconsin, gives us aid in dealing with the subject under consideration:

"The cause and origin of disease is often obscure and elusive. It is not subject to exact and definite proof comparable to physical facts. Unless a determination of such questions can rest on a preponderance of probabilities, justice must often be defeated. With reference to a germ disease this court has said: 'It is often impossible to find the source from which a germ causing disease has come. The germ leaves no trail that can be followed. Proof often does not pass beyond the stage of possibilities, because no one can testify positively to the source from which the germ

> came, as can be done in the case of physical facts which may be observed, and concerning which witnesses can acquire positive knowledge. Under such circumstances the Industrial Commission or the court can base its findings upon a preponderance of probabilities or of the inferences that may be drawn from established facts.' (citing cases.) This rule is applicable here. The evidence eliminates everything except the injury of 1920 as a cause of the cataract. While the result is unusual, it is not impossible. We have, therefore, a cataract due to some injury. The only injury to which it may be attributed is that of 1920. Under the circumstances, a finding that it was so caused is supported by at least a preponderance of probabilities."
>
> Acme Body Works et al vs. Koepsel, 234 N. W. 756 at 757.

We appreciate that the medical witnesses in this case do not find themselves in absolute agreement on all the details of the case; that the plaintiff's condition is due to vascular damage is agreed by all.

Small concern then should be indulged in by the court because the court can certainly conclude that Joe Hennessey is in his present physical condition as the result of damage to his blood vessels brought about by Livingston's fall upon him on June 2nd, 1949.

The Montana Supreme Court in a case where doctors disagreed as to cause and effect of a physical condition said as follows:

> "The record contains no direct evidence from which it can be said that the injury was the proximate condition; this, not because of failure on the part of claimant properly to present his case, but because, on the frank admission of the doctors, no man on earth

knows positively the exact cause of such an affliction in any given case; medical science has not advanced to a point where it can positively trace back from the effect and declare the cause of the disease in a given patient. But this fact alone need not bar the claimant from recovery, if, on the record, it can be said that he is entitled thereto.

The law does not require the impossible; it does not require demonstration or such a degree of proof as, excluding the possibility of error, produces absolute certainty, because such proof is rarely possible. Moral certainty only is required, or that degree of proof which produces conviction in the unprejudiced mind. (Sec. 10491, Rev. Codes 1921.) A fact may be established by indirect evidence, or that which tends to establish the fact by proving another which, though true, does not of itself conclusively establish that fact, but which afford as inference or presumption of its existence. (Sec. 10497, Id.) Evidence is deemed satisfactory which ordinarily produces moral certainty or conviction in the unprejudiced mind. (Sec. 10500, Id.)

Further, the solution of any issue in a civil case may rest entirely upon circumstantial evidence; the law makes no distinction as to the probative value of this class of evidence and direct evidence, and, if the circumstantial evidence in this case furnishes support for the claimant's theory, and thus tends to exclude any other theory, it is sufficient. (citing cases.) In this class of cases the rule is that the burden of proving that the injury was the proximate cause of the condition of the claimant may be proved by circumstantial evidence or inferences having a substantial basis in the evidence. (1 Honnold on Workmen's Compensation, 266, citing cases from Michigan, Illinois, West Virginia and Massachusetts.)

Moffett vs. Bozeman Canning Co., et al, 95 Mont. 347 at page 358, 26 P. (2nd) 973.

See Also:

Hines vs. Industrial Acc. Comm. 8 Pac. 2nd 1021;

Kirby vs. Elk Grove High School Dist., 36 Pac 2nd 431;

Hendrix vs. City of Twin Falls, 29 Pac. 2nd 352;

Riley vs. City of Boise, 31 Pac. 2nd 968.

In the presentation of our case in regard to the testimony of the physicians, we have called as witnesses all doctors who were in any manner connected with the case.

In considering the testimony of the physicians who have testified in the case, if the court finds one more favorable than the other to the plaintiff's case, the plaintiff is entitled to the most favorable testimony, even though there is no material conflict so far as the end result in this case is concerned.

The rule is well stated in a recent case before the Montana Supreme Court. We quote:

> "This is but an extension of the well settled rule that a party is entitled to have the evidence viewed in the light most favorable to him where there is a conflict in the evidence arising from discrepancies between the testimony of his own witnesses. Hardie vs. Peterson, 86 Mont. 150, 282 Pac. 494; Federal Land Bank vs. Green, 108 Mont. 56, 90 Pac. (2nd) 489; Gohn vs. Butte Hotel Co., 88 Mont. 599, 295 Pac. 262; In re Cumming's Estate, 92 Mont. 185, 11 Pac. (2nd) 968; Stranahan vs. Independent Natural Gas Co., 98 Mont. 597, 41 Pac. (2nd) 39."

Lake vs. Webber, 120 Mont. 534 at page 545, 188 Pac. (2nd) 416.

With regard to the damages which arose from the injuries to the vascular system and the resulting physical impairment, the evidence shows that the plaintiff lost 80 per cent of his working time from the year 1950. Dur-

ing that year he received an income from work which he had done in previous years and he lost $4000.00 in earnings for the year 1950; $3000.00 lost in the year 1951 and $1,-500.00 lost in the year 1952, all as the proximate result of his injuries, making a total loss of earnings up to the date of the trial in the sum of $8500.00.

The special damages incurred are Deaconess Hospital $995.50 from January 7th to March 12th, 1950, inclusive; the Soltero Clinic $12.00 expended for treatment of the shoulder and $236.50 from January 7th to May 10th, 1950; $136.00 for Physiotherapy; $240.00 convalesence Northern Hotel, March 12th to May 11th, 1950; which makes a total for special damages of $1620.00.

We have pleaded in our complaint that the plaintiff will be required to incur expense for hospitalization and for the services of physicians and surgeons a total sum of $3500.00.

The sum of $1880.00, modestly estimated, to be allowed for future hospital and medical services is to be anticipated with reasonable certainty considering the condition of the plaintiff.

Therefore, the $1620.00 paid and incurred and the $1880.00 anticipated sustains our pleading of $3500.00.

A very modest figure to allow the plaintiff for depreciation in his earning ability, as the proximate result of his injuries sustained because of defendant's negligence, is one thousand dollars per year.

Taking the annuity table on page 902 of Schweitzer's trial guide, we find the present worth of this loss to be $16,000.00.

Considering his physical injuries, pain and suffering, loss of ability to follow important duties of his profession and certain permanent future mental and physical suffering, the sum of $18,000.00 certainly is a reasonable sum to be allowed to plaintiff as general damages.

The prayer of our complaint is a modest sum when we contemplate the foregoing discussion of the damages sustained.

DISCUSSION

We have used medical authorities in this brief just the same as we would use law authorities from law text books because we have a medical problem.

Dr. Horst made a complete physical examination of appellant. We believe that the conclusions of Dr. Horst, who has had the benefit of a complete review of the life history of appellant and, further, the benefit of the actual medical and hospital records of the patient, particularly the study of the Deaconess Hospital matters,, which conclusions have been swept aside by the decision of the District Court, are fortified by this medical literature.

Lawyers and judges are not expected to be able to make an intelligent analysis of a medical problem or be competent to independently evaluate a complex medical case. We depend on the assistance of men who have devoted a lifetime of study in the profession and call upon the medical expert to aid us in coming to a correct conclusion.

We urge to this Court that reasonable, credible evidence of a witness of the caliber and learning of this man, who

has devoted his life to his profession, and which stands unimpeached, except by experts who say "I don't know" and give us no explanation or support from any medical literature whatsoever, should be adopted by a trial court in its findings. Therefore, we appeal to this Court for relief.

Aside from the opinion of the expert, we have known facts which forcefully and reasonably support his deductions and conclusions.

With this evidence the Court will see that we are correct when we urge that the District Court's decision was clearly erroneous.

Sundquist vs. Madison R. Co., 197 Wis. 83, 221 N. W. 392;

Spirakoff et al vs. Pluto Coal Mining Co. et al (Colo.) 100 p. 2nd 154;

Reed vs. Rosenthal, 129 Oregon 203, 276 Pac. 684;

Shepard vs. Carnation Milk Co., 220 Iowa 466, 262 N. W. 110;

Pfeiffer vs. North Dakota Bureau, 57 N. D. 326, 221 N. W. 894;

Drew vs. Industrial Commission, 137 Ohio St. 499 26 N. E. 2nd 793;

Esmonde vs. Lima Loc. Wks., 51 Ohio App. 454, 1 N. E. 2nd 633.

In regard to the bland thrombosis that Judge Murray fails to understand, we offer this explanation:

The thrombosis in the vena cava and the right and left iliac veins began forming immediately after the intima of these vessels was split and contused by the compression force from the body of Mr. Livingston who fell upon him in the Airport at Pocatello.

No one knew that a thrombosis was forming in these vessels.

Patients rarely enter a hospital for hoarseness, cough and acute laryngitis. Dr. Stokoe hospitalized him because Mr. Hennessey gave a history of a fullness and heaviness in his chest from which he had been suffering for a few weeks and the pain in his abdomen which he had for several months.

X-ray picture of the chest was taken at St. Vincent's Hospital. The x-ray picture showed "minimal changes" to which no significance was attached. This was in reality a pulmonary embolus from the *"bland thrombosis"* in the vena cava and iliac vessels, the presence of which no one knew at the time.

Patient was discharged within a few days still complaining of his chest. Twenty-eight days later, Dr. Stokoe sent him to the hospital again for laryngitis, hoarseness and cough. Dr. Stokoe diagnosed the case as Broncho-pneumonia. After four days, Dr. Stokoe told him he could go home.

At this time, no one knew of the thrombi that had by now fully developed in the vena cava and iliac vessels. Then just as the patient was about to leave the thrombi slipped, united, formed an obstruction at the bifurcation of the vena cava and caused vaso-spasm of the vessels of the leg. *Then* the diagnosis of saddle-like thrombus of the bifurcation of the aorta was made.

This was a *bland thrombosis* that formed which Judge Murray described on Page 5 of his decision.

As a part of the district court's order, it appears that the time element mentioned, from two to seven days in the article entirely relates to the matter being discussed i.e. "Deep Venous Thrombosis *in the leg* following effort or strain.

In this case we have a situation developing in the great major blood vessels in the abdomen so that actually there is no comparison between the time element in this case and the cases mentioned about *the leg*. In those cases we have the compact formation of the tissues of the leg with the blood vessels therein and thrombosis reacts and shows itself in these smaller vessels quickly.

Why overlook the case history shown in the record (R. 319) where it absolutely demonstrates an 87-day period?

No two leaves on a tree are exactly alike.

In this case it took from June 2nd 1949 to January 7th 1950 for the thrombus to develop and the catastrophe strike.

Why didn't we have a massive pulmonary embolism? Because the thrombus did not loosen until it had reached a size sufficient to go against the flow of the blood because of its extent and weight. Also we have a healthy vigorous young man, whose body on the arterial side had no seed beds for a thrombus.

Trauma, and trauma alone, in the episode of Livingston falling upon him, damaging the deep veins, as explained, brought him the crippling condition from which he suffers.

The Crane article has this to say:

> "Pulmonary embolism is rare and in younger patients is virtually unkown. . .
>
> New England Journal of Medicine page 532.

The other doctors, clinging to the arterial side theory found themselves hanging in mid-air with no bodily condition found to support a theory of arterial embolus.

Dr. Horst placed it where it was and abundantly demonstrated why it was there.

A momentary force—true and a bullet likewise hits momentarily and what resulting damage it can do.

We are appending in the appendix to this brief some illustration of the vena cava and the azygos veins, a side view of the area and in addition to the bodyscope Exhibit 7 these illustrations show the collateral venous return which obtains when the common iliac or vena cava would be ligated.

This will illustrate that it is not necessary for superficial veins on the abdomen to be distended unless there is a complete blocking of all of this system as happened in Dr. Pollock's case. Joe Hennessey's case was relieved in a short time and circulation partially re-established so that he had no gangrene of any appreciable extent.

We believe that the learned trial judge demanded a degree of proof in this case which was impossible to supply.

> "The law does not require the impossible; it does not require demonstration or such a degree of proof as, excluding the possibility of error, produces absolute certainty because such proof is rarely possible." "Evidence is deemed satisfactory which ordinarily produces moral certainty or conviction in the unprejudiced mind."
>
> Moffett vs. Bozeman Canning Co., 95 Mont. 347, 26 P. 2nd 973.

We appreciate that it is an extremely unusual case and that it is one which requires deep study and the benefit of unbiased conclusions from the facts which are admitted.

Justice Oliver Wendell Holmes, in one of his memorable observations, once said "that judges sometimes ap-

proach the study of a case for decision with an inarticulate major premise."

We sincerely feel that, going through the trial of this case, his honor was likewise possessed of an inarticulate major premise which reacted unfavorably to appellant.

Dr. Hans Selye in his book "The Physiology and Pathology of Exposure to Stress" deals with many of the problems showing inter alia that any injury to the human body is met by adaptive responses. In the process of the adaptation syndrome, a substance known as hyalin is discharged into the blood stream. As it passes through the blood stream under the effect of reduced blood pressure, which is so frequently a concomitant of shock, it causes irritation in the tissues in which it is deposited and thrombosis ensues by it takes time and the eventual process of thrombosis is a slow and insidious one.

It was a slow insidious process in the Hennessey case.

CONCLUSION

Dr. Horst carefully, thoroughly and intelligently examined the appellant and he made an exhaustive study of all the facts and the medical and hospital histories of the appellant and his physical condition since boyhood and even studied his family history and considered appellant from childhood to the present time.

He was and we are convinced beyond doubt that the unfortunate crippled condition of the appellant came about by reason of the unusual accident which took place at the Pocatello Airport on June 2nd, 1949.

Throughout his testimony Dr. Horst has again and again stated that the fall of Livingston upon Mr. Hennessey was entirely responsible for the vascular catastrophe which developed and produced the crippling condition of the appellant.

This Court should be convinced of the extremely reasonable logical and honest considerations supporting Dr. Horst's conclusions in this case. Dr. Horst is right, absolutely right.

We have brought to this court of justice a complete history of the appellant from the time of his birth.

There never has been a case tried in a court of justice where a more complete presentation of facts have been offered.

The entire medical profession of the City of Billings, became interested. X-rays were taken. The case studied. All laboratory tests known to medical science were made of plaintiff's body, head, heart, lungs and vital organs and particularly the blood vessels.

All were found to be in excellent condition as far as any disease process was concerned.

This young man had no diseased blood vessels. No diseased organs. No diseased tissues.

Disease has been absolutely ruled out as a cause of his condition. The size of the blood clot was such that it could not have come from any small blood vessels.

The only serious illness which the plaintiff ever had is not infectuous. It does not and did not produce blood clots, particularly in view of the fact that the residuals of the disease have disappeared for several years.

The automobile accident was too remote. He had completely recovered from it. It was not the type of an accident that could produce vascular damage.

The occurrence of June 2nd, 1949, on the contrary was the compression type of injury. It was the type which would have and did damage the deep blood vessels at the bifurcations and folds by transmitting the shock to the inner linings according to Pascal's law.

Pain of unrecognized source was present in the plaintiff's abdomen, caused by the damaged blood vessels from the date of the injury until the date of the calamity in Deaconess Hospital.

Your Honors, we say in all sincerity, "There is but one cause, as has been repeatedly said and explained by Dr. Horst, which is responsible for the wrecked physical condition of the plaintiff and that is the fall of Livingston upon him on June 2nd 1949."

Trauma and trauma alone to the large blood vessels produced this extensive, propagated thrombus which slipped off and caused the damage.

We have shown how Livingston's negligence resulted in his fall upon plaintiff.

That it occurred in the scope of his employment which establishes the responsibility of the defendant.

We have outlined the damages from the extremely reasonable charge of Dr. Stokoe, through the extremely reasonable items of past and future damage.

The District Court's decision, being clearly erroneous, this Court is appealed to for the relief which appellant is entitled to in this case.

Respectfully submitted

DOEPKER & HENNESSEY

By M. J. Doepker
M. F. Hennessey
Attorneys for Appellant.
312-316 Medical Arts Bldg.,
Butte, Montana.

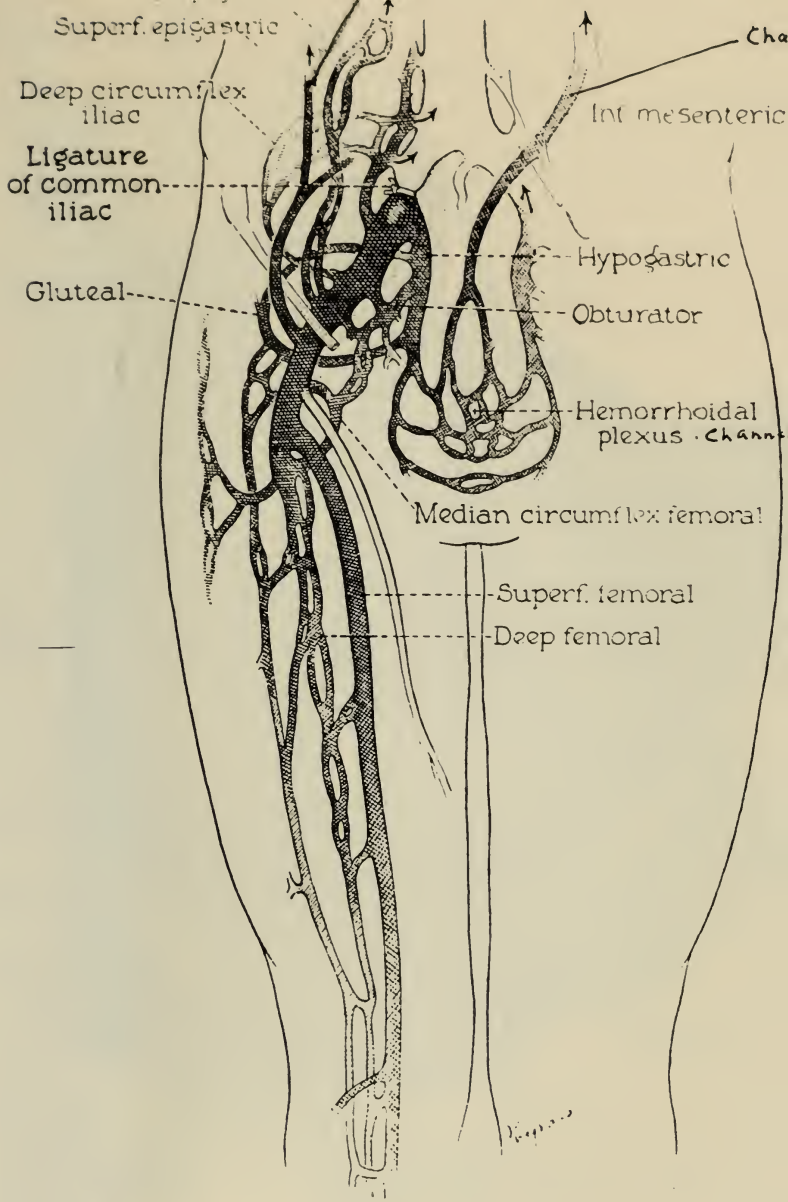

Fig. 4. A diagrammatic sketch as in Figure 3, showi
the very much more abundant collateral venous retu
when the common iliac vein is interrupted.